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ORIGINAL ARTICLES

THE MECHANISM OF THE WAR NEUROSES¹

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THE importance of the war neuroses for peace conditions lies chiefly in two things; its mechanism and its therapy. These two things are capable of utilization in the practical problems presented by the neuroses as they appear in the clinics, hospitals, and practice of neurologists.

Inasmuch as a therapy of the neuroses must be based upon a conception of their mechanism, these two aspects of the question are intimately related.

By mechanism is meant the coordinating factors in the production of a neurosis in so far as they represent an integrating structure. It is obvious that this kind of consideration implies the examination of several factor groups. First, the individual as represented in this instance by his nervous system. Secondly, the traumatic incidents associated with warfare in its various phases. Third, the reaction of this nervous system to such traumata. The end result is a type of war neurosis and stands out as a kind of crystallization of the hard won adaptation or compromise to the ever present contingency of participation in the activities of warfare.

An analysis of these several factor groups should give a workable scheme of the cause, the purpose, and the machinery of the war neuroses.

¹Read before the American Neurological Association, June 17, 1919.

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The basis of a study of this kind should be a sufficiently large number of cases seen under the varying conditions of warfare, so that, the soldier may be studied as nearly as possible at the first inception of the traumatic impact, whatever its nature may be, and down through the various phases in the development of his neurosis.

It implies observations of forward areas, forward neurological stations, special base hospitals and so down to convalescent camps, home hospitals, and then in the stage of active contact with previous environment. A study of the anticipatory type of neurosis on the way up to the front is essential to get the complete story.

A good deal of what I have to say on this subject has been set down in a paper published in the Archives of Neurology of May, 1919, under the title of "War Neuroses as Physiological Conservations." I mention this now more to indicate the conception of the war neuroses that has developed in my own mind than with any desire to emphasize that article.

The war neuroses appear to me to be physiological conservations, the purpose of which is to protect the individual against either experiencing or re-experiencing the varying traumata of warfare. The purposive character of a neurosis must be admitted before this conception can be accepted. The evidence of this is derived partly from the study of numerous instances in which the neurosis developed as a measure of protection in the face of an immediate event and tended to disappear when the necessity of this protection was no longer present.

The further evidence of the purposive character of a neurosis is to be found in the study of the defense system present in all living things to counteract the destructive agencies met with in the struggle for existence. The physiological system of defense, of which, perhaps, the phenomena of fatigue is the best example, blood pressure variations, the polyglandular functions brought into activity by emotional stresses are sufficient to indicate the general line of reasoning followed. The chemical reactions shown by immunity, the protective influence of changed anatomical relations, such as hypertrophy of heart muscles, arteriosclerosis, etc., are suggestive that defensive reactions are the most usual methods against the incidental destructive agencies in the conflict of life.

By analogy it may be admitted that a similar system of protection exists in what might be designated as the psychological sphere, and in this territory the neuroses for the most part find their place. Apart from analogy numerous studies by the several methods of investigation

such as hypnotism, psychoanalysis, or any other type of analytical study, has established the fact that the neuroses are in the main protective or defensive in type. Admitting this, and it would seem impossible to refuse to do this, then the purposive character of the neuroses follows. This gives them therefore a place in the defensive system of the organism, and as such they can be objectively studied in the same way as other conditions found in the living organism which result from changes produced in the course of adaptation to conditions which threaten its integrity.

In giving to the neuroses the characteristic of purposeness the assumption is not made that this purpose is conscious, or has the quality of awareness. The purposeful plan of a neurosis arises frequently from its utter necessity to the individual, so that it must possess also a degree of automatism approaching that of a reflex. The neuroses, therefore, should be thought of as purposeful elaborations of a series of co-ordinated reactions. This places the individual in such a condition of neutrality to the activities in which he may be called upon to participate that for the time being at any rate he is saved from exposure to whatever traumatism with which they may be associated. The neurosis, therefore, protects him from either re-experiencing a set of traumatically laden experiences or experiencing those which by anticipation he is prepared to find as destructive as the actual experiences.

In the war neuroses we are dealing with a given set of traumata, chiefly of a violent character in which elements most destructive to the human organism are found. So destructive are these that they stimulate into activity the most fundamental of all instincts: that is, self preservation. In the civilian neuroses it is seldom that the protective quality of the neurosis is activated by so deep seated an instinct as this. For in these conditions are found factors due to social and economic stresses of one kind or another, which set into activity the secondary instincts. In the further study of the civilian neuroses important use of these secondary instincts, and of course the second of the primitive instincts, the sexual instinct, in its broadest conception, should be made. In the neuroses of war, however, there stands out this primitive instinct of self preservation and its most powerful activating force the emotion of fear.

If, therefore, the conception of the war neuroses as a primitive purposeful defense system and its activating agency, the instinct of self preservation with its emotional stimulus, fear, be admitted then the ground work of the mechanism is laid, which, when set into activity

under given conditions and under the influence of personal reactions, results in the various clinical pictures to which the term war neuroses is given, or shell shock, the term used in the British army.

Before taking up the various instances leading up to the production of the neuroses in the soldier, a definite statement of the writer's view as to certain much discussed points must be made.

First, there is a small percentage of cases, probably under 2 per cent., in which there is evidence of a definite change in the nervous system produced by concussion. These cases are not primarily war neuroses, but the symptoms are capable of organization into the typical clinical pictures of war neuroses as a subsequent phenomenon. These cases are types of severe concussions in which the structures of the nervous system are so severely shocked or disturbed in their continuity that traces of this change can be demonstrated. Globulin in the spinal fluid, some increase in the cell content, or in some instances changes in the optic disc have been described.

Second, any soldier whatever his past history may be and without any evidence of neuropathic inheritance and without any marked neuropathic tendency may under proper conditions become the subject of a war neurosis.

Third, such soldiers who belong to any of the so-called neuropathic types will probably develop a war neurosis more readily and recover from it less readily than the strictly normal individual.

Fourth, a great percentage of uncured cases belong to the neuropathic class.

Fifth, the presence of a severe wound of any kind furnished so adequate a defense in the aforementioned scheme that the necessity of a neurosis does not arise.

A soldier going to the front area or in the process of his training for that period is more or less constantly under the influence of a series of automatic repressive exercises. Some of these have to do with the anticipation which tends to arouse in him the emotional consequence of an expected series of experiences. The outward evidence of this emotion naturally is not evident or perhaps it is side tracked by various substitute actions following the well-known Freudian rule. The normal soldier soon becomes accustomed to his environment and shows no evidence of the conflict which is being carried on in his consciousness. Inhibition or repression becomes automatic, habitual, a reflex. He is not consciously concerned, therefore, with anything that has not the touch of reality and he lives chiefly and is interested

chiefly in his environmental contact. There are certain things he must not do and there are certain emotions, traces of which he must not show. His own sense of soldierly conduct, plus the grip of discipline and that greater and more intangible thing called morale, all aid in fixing the repression tendency until it becomes habitual. Such evidences of fear as he feels are prevented from becoming dynamic or translating themselves into muscular activity by the necessity of his position as a soldier, whatever the special activity of his position happens to be. Such a typical soldier, I believe, will never develop and can never develop a war neurosis, unless an event or series of events happen to him which have the tendency to lessen the grip which the habitual inhibition has upon him. Whenever there comes to him a series of events which tend to weaken him physically or mentally so that inhibition needs his conscious attention then the preliminary or favoring elements in the production of a war neurosis are set going. These in the order of their importance, as shown by experience, are fatigue, loss of sleep, hunger and thirst, worry, responsibility, uncertainty, and the general lowering of discipline and morale. The condition thus produced favors the production of a state which permits the self-preservation instinct to have full control and to act in the only way this instinct can act; that is, in the production of some muscular effort which tends to shelter the individual from whatever destructive agency is in sight; flight, concealment, immobility, are the common maneuvers which result. The soldier cannot adopt these measures of defense as a general rule and there is substituted one of the types of the war neuroses.

There are two kinds of traumata which are commonly met with in the histories of cases of war neuroses. Both of these act similar to shock process and both of them have the capacity to produce dissociation phenomena in consciousness. One is a suddenly acting shock effect mechanically produced which acts in the manner of a concussion; the other finds its shock result primarily in the emotional sphere. Both of them render the soldier either confused, dazed or unconscious.

The mechanically produced shock is usually due to the explosion of a shell in the neighborhood of a soldier by which he is concussed, stunned, tossed about, thrown to the ground and at times buried. The emotionally overloaded experiences are any of the numerous unexpected, sudden and terrifying events which occur either to the soldier or of which he is a witness. Commonly these experiences leave him untouched physically, but so disturb the vaso-motor mechanism

that consciousness is suddenly lost, or is gradually or partially lost. In both instances a period, sometimes longer and sometimes shorter, intervenes in which the soldier loses his self control and enters into a condition of daze, confusion and automatism. Inhibition is completely lost and the self preservation instinct tends to act, unrestrained by any exercise of conscious or automatic inhibition. The recently acquired results of discipline or morale tend to disappear completely, and the soldier for the time being acts as an instinctive and primitive organism, under the guidance of the most primitive of impulses, that is, of self preservation.

For the development of a neurosis, or rather in order to start the soldier on the way to a neurosis, two circumstances are necessary. First, there must be a mechanism by which the initial symptoms resulting from the traumatic experience tend to become fixed and there also must be introduced a means by which the symptoms thus fixed may become elaborated. Therefore, fixation and a state of acceptance or suggestibility furnish the necessary mechanism to this end.

It is in the period of returning consciousness, when the soldier is dazed and only dimly aware of his surroundings and only partially in touch with the military environment, that these two factors act with a surprising promptness and definiteness. It is here too that the tendency toward fixation of the last conscious act of mechanical defense becomes through habituation an objective symptom which by repetition often completely dominates the clinical picture. Movements of dodging, bizarre movements of the hands to protect the face against the blinding flash of an explosion, tic-like movements of the head and neck, gross choreiform movements of warning, signalling, fixed attitudes of the hands and trunk, fleeing movements of the legs, spastically fixed positions of the extremities, etc., are found on returning consciousness to have become automatic and divorced from conscious control, through the mechanism of dissociation resulting from the acute shock process. The blindness resulting from the flash of an explosion, the deafness due to the sudden impact of air in the auditory canal, the dislocation of the speech function into muteness comes about in this fashion. I mention these few symptoms to illustrate what is conceived to be the origin of such symptoms and not in any measure to describe the resulting clinical picture. Many a soldier at the stage of returning consciousness has been diverted from becoming a subject of war neuroses by the setting into activity of two counter currents. These act as neutralizing agents to the further stereotyping and elab-

oration of symptoms. One has to do with the awakening, in the soldier's mind, of the previously obliterated inhibition; the other is supplied by the agency of skillfully rendered neurological treatment. If both of these two things happen to be present then the soldier gradually regains his former condition and the acute symptoms tend to disappear and within some hours to a few days he is in condition to take up again his duty as a soldier. If neither is at hand; that is, if in the soldier's personal make up there does not happen to be enough residue to start the counterflow, and if he escapes intelligent handling, neurologically or otherwise, he automatically surrenders himself to the developing neurosis and reaches the base hospital as a well established example of one of the numerous types of war neuroses.

This effort at re-establishment may take place at any time from the moment when some trace of consciousness is present to the period of transportation and stay in a hospital. This part of the mechanism I have termed the convalescent conflict.

The further removed the patient is from the actual combat zone, that is, front area in the broad sense, the more difficult will restoration be.

This brief outline of the mechanism is a mere framework out of which the various types of the neuroses may develop, and as such be classified according to the mechanism set going in each particular case. The particular kind of neurosis that develops represents the personal reaction of the individual; his own reaction type to psychical traumata; his previous personal neurological experience; his own tendency to processes of dissociation; his imitative faculty; and his automatic acceptance or suggestibility. This personal equation is influenced also by what might be termed his autonomic reflex formula, or what may be described more concretely as his own characteristic type of fear reaction. In this way hysterical dissociation results from the acute shock process as the simplest and crudest kind of defense reaction with its fixations of initial symptoms. The anxiety neurosis comes into being when the conflict takes on an ethical quality, due to the consideration of the various factors entering into the question of right and wrong, inadequacy, sense of duty as an officer, etc.

Neurasthenia, psychasthenia, and the other clinical types which I have outlined, each have, I believe, a mechanism capable of this kind of analysis, and present variations which can be clinically differentiated.

Two important considerations may be emphasized in concluding this brief outline.

First, war neuroses represent in general a compromise between a soldier's manifest duty and the pull away from this in the direction of self preservation. This compromise shows itself by one of the various kinds of war neuroses.

Second, the particular clinical variety shown in each case represents the personal response of the individual to the traumatic incidents which his nervous system has to meet and for which no adequate adaptation is possible except through a war neurosis.

NEUROPSYCHIATRIC PROBLEMS AT THE FRONT DURING COMBAT

BY JOHN H. W. RHEIN, M. D.

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THE war neuroses as they occur in the French, English, German, Russian and Italian armies, if we judge from the literature and some personal observation with the French and English armies correspond practically exactly to those which were seen in the American army. There were observed, however, some features in respect to the type of reaction which the American soldiers displayed which will be of interest to describe and which differ to some extent from those seen at least in the English and French armies.

This difference in the reaction was more striking in hospitals situated at the front, although it was somewhat apparent in the base hospitals as well. In the English armies, for example, the favorite form of neuroses among the soldiers was hysteria, while officers for the most part suffered from anxiety states and rarely hysteria. This is alleged to be due to the difference socially and educationally between the English soldier and officer, a difference which in the American forces was not so evident for obvious reasons.

In the American army on the whole, it can be said that the most common forms of the war neuroses in both officers and men alike were anxiety states, neurasthenia and psychasthenia, the proportion of hysterical cases on the whole being in the minority. This was true especially in the army neurological hospitals situated at the front, where the major hysterical manifestations were extremely rare. In the American army the reflex disorders described by Babinski, as occurring among the French in large numbers were comparatively rare.

I believe it will be interesting and instructive to go into some detail in describing the condition of men coming into the hospitals at the front, a few hours after the appearance of the symptoms which

determined their evacuation to these hospitals. On admission which was usually between the hours of noon and two in the morning the men arrived dirty, muddy, silent, trembling, tense, with drawn faces, and relaxed postures, seeking resting places at once on a bench which may be a part of the scanty furniture of the receiving ward of a front line hospital, on the floor, or leaning against the wall, if the bench was not available.

A careful analysis of the mental state of men under these conditions of course was out of the question.

They seemed however, in the main depressed, awed, anxious, afraid they had acquired some incurable affection, that they were paralyzed, or were losing their minds.

They were at once given a warm shower bath, some food and sent to bed whereupon they fell into a deep slumber which lasted usually a day or two, awakening reluctantly for food, the calls of nature and examinations.

After a study of the cases they could be divided for the most part, into:

(1) Those who presented actual hysterical phenomena, such as: aphonia, deafness, blindness, paralysis of the limbs, amnesia and confusional mental states, of which there were comparatively few; (2) those who had well defined anxiety states; (3) the neurasthenics; (4) the psychasthenics; (5) those presenting a psychotic reaction; and finally (6) those who are best described as examples of hyperemotivity.

As I have already stated the number of cases presenting definite major hysterical phenomena was small and most of the cases were those suffering from anxiety states, neurasthenia and psychasthenia. There were, however, a considerable number of cases which had not really yet reached the point of being definite neuroses. These cases were examples of hyperemotivity, and were by far, the most interesting and instructive of these cases with which we had to deal. They presented mental and nervous states, which I have spoken of as potential neuroses. Soldiers exhibiting these symptoms had arrived at a state of nervous instability, high tension and suggestibility, which on the one hand, made them susceptible of being restored rapidly and promptly to a fairly normal state, and, on the other hand, just as susceptible of acquiring symptoms through the agencies of suggestion and contagion, which in turn permitted the development of actual neuroses.

Practically all the cases received at the hospital and coming

under the classification of war neuroses presented the same history as far as the etiological factors were concerned.

Practically all had the same exhaustive physical experience and a large proportion of them the same emotional and commotional experiences.

Concussion experiences, that is to say those in which a man states that he had lost consciousness or memory after having been blown over by a shell, occurred in about 50 to 60 per cent. of the cases.

In the cases simply presenting a state of hypermotivity, the history showed that the emotional trauma was more frequent than concussional trauma.

Taking as a group, predisposition, both family and personal, was present in less than half of the cases. For example, in 342 histories in which the family predisposition was studied, it was found that it was entirely negative in 195 cases and positive in 137 cases, as to insanity, cancer, tuberculosis or nervous manifestations in father, mother, sister or brother.

A study of the histories of these cases in relation to previous mental or nervous diseases showed that in over 50 per cent. of the cases there was an absence of any previous nervous disorder.

In 320 cases in which the previous history of the individual was examined it was found that in 174 instances the history was negative as to nervous disorders, while in 146 cases there was a history of nervousness, nervous breakdowns, nervous temperament, phobias, traumatic neurasthenias, chorea, fear of the sight of blood, frontal headaches, epilepsy, bed wetting, sunstroke, delinquency, dizzy and fainting spells, hysteric attacks and drug addiction.

It is not difficult to understand why those who showed a clean bill of health previous to their war experiences developed states of nervous instability which rendered them susceptible to the development of neuroses. The experiences at the front in combat were so intense, so strenuous and so exhausting that one acquired in a short time a state of nervous instability which in civil life would require months or years to bring about.

The symptoms presented by the soldiers who suffered from hypermotivity were characteristic when under shell fire. They were unable to "carry on," they felt weak, were dizzy and afraid, they sought places of safety, desired to run and hide, or stood still and shook; they lost their heads, they fell down from weakness at the sound of nearby exploding shells; they expressed themselves as afraid

of shells and slept poorly. This condition incapacitated the soldier and rendered him unfit for front line duty and was the cause of his being evacuated to the rear. These symptoms may be recognized as the crouching and flight reactions of fear.

When these soldiers arrived at the hospitals they presented little or no symptoms, except evidence of great fatigue, some exhaustion, more or less marked general tremor, and a state of apprehensiveness that they would be sent back to the fighting lines. They acknowledged that they could not stand the shells. There was no actual neurosis to be recognized as such. The condition appeared to be an intense reaction to fear, an exaggeration of the physiological response to this emotion and entirely uncontrollable, in spite of all the influence brought to bear upon the individual to overcome it, such as crowd psychology, amour propre, patriotism and all those factors which help a man to maintain a correct position with his associates.

A particularly interesting feature of the condition of the cases in general coming into the army neurological hospital is their state of great suggestibility.

They reacted, with amazing promptness to the suggestions which were made by the medical officer upon their admission to the receiving ward. At once there was pronounced lessening of the tension and a distinct relief observed in the anxiety state which the soldier presented.

The hysterical manifestations yielded readily, and in the majority of the cases within a day or two after admission. In fact, after rest, baths, abundant food and treatment by suggestion, in 60 to 70 per cent. of the cases the symptoms disappeared and the men were fit to be sent to their organizations within ten days to two weeks.

If the soldiers restored to a condition which it was considered fitted them for front line work again, were allowed to remain in the hospital before they were evacuated, a further reaction occurred. A certain percentage of these soldiers began to complain of physical ailments such as pains here and there, digestive disturbances, ill defined nervous systems and a mental attitude of doubt as to there being well enough to return to their organizations.

The symptoms can be best described as being in the nature of hypochondrical manifestations, and these no doubt resulted from the opportunity to think over the dangers of the front in comparison with the safe and comfortable conditions under which the soldiers found themselves, and the influences of contagion arising from associations with others who were destined to go to the rear. These

symptoms increased in intensity the longer the soldier remained in the hospital. The plan was to evacuate these men at once upon their recovery, the object being to anticipate the development of these phenomena, but in an offensive the difficulty of finding the location of their organizations, and the scarcity of transportation made it impossible always to achieve this end promptly.

The fate of those evacuated to the rear is another interesting feature of the subject. When the soldiers are sent back to the rear from the Army Neurological Hospital, except for a small number exhibiting tics, there are rarely any pronounced hysterical phenomena observed, most of the cases being examples of anxiety states, neurasthenia and psychasthenia.

At the base hospital, however, may be seen a variety of hysterical manifestations in considered numbers, such as stammering, mutism, some paralysis, gait disturbances and amnesias.

There are two pictures diametrically opposed, one at the front, the other at the rear.

What is the explanation? The cause of this I believe can be found in two factors. First contagion plays an important role. On the way back through evacuation and camp hospitals and even base hospitals, before reaching his final destination, the soldier is exposed to contagion and suggestion, by coming in contact with those who have already developed neuroses. Secondly, in a base hospital situated a long distance from the front, the horrors of the front are emphasized, and as a result of the opportunity to introspect, there develops a reaction which expresses itself in the creation of symptoms which incapacitates the individual for front line duty.

This reaction is less likely to occur in hospitals situated at the front where it was generally understood that after a few days the soldiers would return to their organizations at the front, that they would be cured promptly, and where the mechanism of the causation of their symptoms was explained to them before fixed neuroses had actually developed.

The patients at the front were in a nervous state which can be termed fluid which on the one hand rendered them susceptible of being restored to a normal condition readily, or on the other hand, if not properly dealt with and allowed to be exposed to pernicious suggestion and contagion permitted the development of fixed neuroses.

Finally a word as to another reaction which is observed at the front, namely, a certain psychotic coloring of the symptoms. A small

number of the patients presented symptoms suggesting dementia precox. These soldiers were negativistic, paranoid or hallucinatory. They assumed attitudes and showed no interest in their surroundings. They recovered in many instances however, in a few days, and to all appearances seemed perfectly well.

Sometimes there was a manic-depressive coloring to the symptoms. In some instances the patient presented a state of excitement with flight of ideas, some incoherence and great restlessness; in others there was simple depression, in which the patient was preoccupied, silent, the countenance sad, the thoughts dwelling on the horrors of the battle field.

From these symptoms the patients recovered as promptly as from the other conditions spoken of as the war neuroses.

These reactions are especially interesting as illustrating the character of the soil upon which is built the particular form of neuroses or psychosis. When a soldier passing through experiences which in some produce hysteric, psychasthenic, and neurathenic phenomena, hyperemotive states and in the cases under discussion, symptoms suggesting certain definite mental disorders what is the explanation? It seems to me it is due to a certain mental makeup of the individual, which in the case where the symptoms resemble dementia precox indicates perhaps that the individual if not a potential precox, at least had a precox personality and in the case where the manic-depressive symptoms occur, that the individual perhaps may be looked upon as either a hypomanic, or as having a manic depressive make up.

These reactions represent transient psychotic states developing in individuals with abnormal mental make ups, the result of severe emotional trauma, in which the elements of fatigue and exhaustion play a certain role.

THE EMOTIONS AND THEIR MECHANISM IN WARFARE

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IT IS alleged that the emotional strain of the war is the direct cause of many functional disturbances of long duration seen in the soldiery. There are strong reasons against this interpretation. In the first place, the number of cases showing emotional perturbations apart from those having organic disease or definite toxic conditions is comparatively small. For instance, the figures of the Army Centre of Epernay.

Among 90 patients occurred emotional symptoms due to:

Emotional confusion	1.3%
Commotion	5.10%
General causes	2.5%
Alcohol	2.5%
Various incidents of trench life.....	5.8%
Confusion	15%-31%

In army zones—1600 patients of which:

Mental	45%
Psycho-neur	45%
Org. N. D.	10%

If it is contended that most of the emotional cases are undetected in the army centres and are evacuated in the Interior, figures again show the contrary, for the proportion of cases in the Army Centre of Marseilles is as follows:—

Out of 1249 cases of functional nervous disorders only 70 were classed as emotives. But it is proper to observe that there must have been several whom other clinicians would have so catagorised among the 102 classed in neurasthenics and psychasthenics, and even among the 143 commotions.

At Maison Blanche out of 305 patients 20 were diagnosed as emotives, that is, 1 per cent.

At Rennes emotional syndromes diagnosed in 22 per cent.

At Bourges out of 10,000 patients emotivity was diagnosed in 13 per cent. but these included also asthenics.

All these figures show that the relative number of emotional cases to those definitely hysterical in nature and rapidly cured is very small.

Further, patients of the emotional type, such as those which have been called "Psychasthenics," are able to remain in the firing line without greater inconvenience than they suffer in civil life. Indeed they do not break down until they are given responsibilities too great for them to bear.

It must always be remembered that really severe fear always shows physical signs, pallor of the face, changes in the pulse, sweatings, pilomotor reactions, pollakiuria.

Tremor, when it occurs, does not possess any characters which enable us to distinguish it from an assumed tremor, and is a very poor ground on which to make a diagnosis. Tachycardia is not a diagnostic criterion, because a great many patients develop a tachycardia who are not at all in a state of fear. They do so from cardiac exhaustion, intoxication or disorder of the thyroid gland, none of which may have anything to do with the emotions as regard their origin. True anxiety states tend to make themselves felt during sleep by modifying the dreams and even by creating insomnia.

Indeed, in some instances, the patient shows himself capable of overcoming his dread during the day but he is overcome by it when his volition is in relative abeyance during sleep. In these cases the patient is awakened by terrifying dreams and gradually loses condition and power of resistance in consequence. It is a very different state to that of the alleged emotive, but in reality hysterical, type.

When these last cases are genuine they must be completely differentiated from asthenic conditions. The real mechanism is an associational fear psychosis.

The importance of the distinction in practice is that such cases are readily curable but only by proper psychotherapy, whereas it is perfectly useless to cure by psychic means symptoms which are the result of asthenia whether constitutional or acquired. These latter patients are, in any case, unfit for hard campaigning because of their physical weakness. The men we are considering, however, are those who break down suddenly in consequence of what is alleged to be an

emotional shock or the culmination of prolonged emotional strain.

Among these are two distinct types, namely: 1. Those who are simply fatigued, and of whom, in consequence, the power of inhibition has been lowered by the mechanism alluded to on page 20. 2. Those in whom there is no question of exhaustion—the psychogenetic cases. The real mechanism of this latter type is the conditioning of the mental attitude by a belief that they are no longer capable of withstanding what they have learned to believe is the exceptional psychic strain of life at the front, i. e. by suggestion.

It is this vicious mental attitude which has to be changed in order to cure the condition. It is much easier to do this in the case of soldiers recently affected in this way, than in the case of civilian patients with associated fear psychoses and anxiety states of long duration. And yet, it can be done in these latter patients in a comparatively short period of time by a proper understanding of the patient and a re-conditioning of his reactions toward the situations which have hitherto provoked dread. Such instances are the following, shortly summarized:—They are types of accidental phobias of intellectual order which are derived from a misunderstanding due to auto-suggestion, and easily curable.

Thus, in a lady without the least psychopathic heredity, who for 8 years had severe claustrophobia accompanied later by agoraphobia necessitating a companion when she left the house, a cure was effected in ten days. This was done by finding out the circumstances which had induced the first symptoms and then re-conditioning the patient's reactions by compelling her to explain them in writing, by persuasion of the most impersonal indirect kind, and finally by psycho-motor exercises directed toward overcoming one particular difficulty, viz: that of crossing alone a wide space. (In full in *Internat. Clinics*, Vol. IV, 1919, *Management of Phobias and Obsessions*.)

Again in a lawyer of 28 who had always been obsessed by a fear which he could not define, and a propos of no particular event or circumstances, it was ascertained that his dread originated in the teachings of a relative who had done all he could to inculcate the boys he dealt with that, "fear of the master is the beginning of wisdom" and so successfully that he poisoned the patient's life. In addition there was a highly charged psychopathic heredity on both sides of the family, and two brothers seriously defective, so that the patient strongly believed that his fear was a product of a degenerate constitution

causing moral cowardice which the great efforts he had made in subjecting himself to all sorts of danger had failed to overcome.

Nevertheless he has remained well under very trying professional conditions for 8 years as a result of the re-conditioning of his attitude toward himself which was effected in less than two weeks time. (In full, *Illinois Med. Jour.*, 1914, *Genuine and Spurious Psychotherapy.*)

A farmer lad of 23, not of high mentality, impressed by a notion of his own inferiority, made four attempts at suicide after a long period of seclusiveness and mental depression. He has now for 6 years been a successful producer on his mother's farm as a result of a few days resetting of his ideas, during which he was taught the error of his inductions about onanism and learned to respect himself once more. (In full, see *Journ. Insan.*, 1914, *Prevention of Suicide.*)

The fundamental difference between the mechanisms of the two types of phobic obsession is that in the one case we find an emotional pre-disposition of the patient's inherent in the constitution of his organism which compels him to react unteleologically to circumstances which the average man deals with without serious perturbation. The behavior of the panto-phobic of this kind is only an attenuated example of the very easily excited uncontrollable phobic reaction of the patient who is in a state of intoxication such as one so commonly sees in the eruptive fevers, in chronic alcoholism and in other forms of mental confusion, such as those ensuing upon malnutrition or exhaustion, where the confusion indeed may be very slight, but where the phobic reaction may be most incommoding. (See *Management of Confusional State Internat. Clinic*, 1917, Vol. II, Line 26.)

A fact which points to another important element in the symptomatology of the phobic is the wish to conceal his foible from others, his belief that his morbidity is very grave, his dread that his disease will progress to a degree constituting insanity, his fear of discovery. In many cases there is added to these feelings that of shame at his own weakness concerning what he feels to be an absurdity. In such cases the discovery of the mechanism of origin of the particular phobia is an important element in enabling the patient to comprehend the real nature of his condition.

It is only when this is understood he is able to view his reactions rationally, almost impersonally. He learns to see in what way they have occurred, and is thereby enabled to forestall them. This must not be done by a cowardly avoidance of the situations which provoke

the phobia, but by facing such situations with a clear and open mind and by analyzing his own relationship to the situation each time it arises. In this way, the situation rapidly becomes shorn of its emotional aspect, for the patient has learned to view it scientifically, whereupon the morbid affect, which it has formerly aroused, ceases.

This method which I have always found successful, is essentially very different from the former methods in which these patients were treated, such as emphasizing the lack of gravity of the phobia, by pooh-poohing it, by ridiculing it, or worse still, by attempting to distract the patient in occupations, recreations, or worst of all by hypnotism, isolation or rest-cures. These methods, so far from being beneficial are harmful. The rest-cure for instance gives the patient more occasion to brood upon his trouble, and even hard work and occupation fail to arrest the morbid process. Indeed, in some instances, intense occupation only gives opportunities for the patient to multiply the circumstances capable of provoking his phobia, while hypnotism further aggravates suggestibility.

For instances, in one exceedingly hard working lawyer, his phobia of the number 13 and of the day Friday so fastened itself upon him that there was scarcely any hour of the day which he could not associate with this superstition by methods of addition, subtraction, multiplication and division of numbers, so that the more engagements he made the more he had to struggle against this tendency. In another case, also a lawyer, intense application to study only made more prominent his consciousness of the difference between himself and others.

None of these methods of treatment aim at the cause of the condition as all medical art should. The *essential cause of phobias* of this type is *a conditioning of the affective reaction toward a given situation because of a mistaken notion regarding it*. The mechanism is most simply and clearly illustrated by the reactions of the animal in whom a given signal has always been associated with a given experience.

THE PRINCIPLES OF CURE. Now, each of these patients suffered a true emotion of fear during the periods in which there was brought to consciousness the situation which was in each case legitimately enough the subject of dread on account of the way in which it was regarded.

The principle was no different from that of the way in which the dog in Pavlov's experiment learned to regard with dread the signal which warned him of the arrival of his master bearing a whip

with which he would be beaten. The signal immediately provoked a severe state of fear with all its physical accompaniments. But this reaction was very easily re-conditioned into a reaction of pleasure at hearing the signal after re-education of the dog taught him that the warning was no longer one of a beating but of a piece of meat.

On the same principle, the patient who has hitherto feared to cross an open space because of the dread that his heart may give way and that he may be run over by a passing vehicle, and who develops the physical reactions of terror in consequence, can, when he is taught that the basis for his dread was a false one and that there is no danger of his fainting, very quickly learn to cross that open space without qualms.

Even when this more natural type of substitution of one belief for another is not available, as for example when the patient's fear is well founded, yet his reaction toward the fear provoking situation may be changed by inbuing him with a different attitude toward it. This is really quite a commonplace procedure, for it is the means by which the vast majority of men willingly encounter the great probability of severe injury or death in the present war. The attitude of the physical coward is replaced by that of the patriotic hero. Indeed in most cases the ordinary solicitations such as those of esprit de corps suffices to secure the mental attitude of bravery. It is in the cases where the usual motives have not sufficed and where the emotion of fear dominates the patient that the psychiatrist is called upon to exercise his skill in providing the patient with insight and motives powerful enough to change the way in which he looks upon his own relation to duty, country and death. Here again the psychotherapist is only performing the kind of task he is asked to perform in civil life, namely, the re-conditioning of a patient's reactions toward difficult situations which the usual motives of business, social or family life have not been able to effect.

It must be remembered that the majority of patients who present emotional reactions of this type tend to exaggerate them in order to justify an apparent cowardice which they themselves honestly reprehend in many instances. They, so to speak, nourish their emotional reaction by keeping that which stimulates it in the foreground of their consciousness. They become beset by that which disturbs them. Indeed they take a certain pleasure in watching the consistency with which they start at a sound, recoil at a movement, tremble at a loud word. Some of these patients are of the mythomantic type,

and are really playing a role without being themselves quite aware of the fact. (Journ. of Criminal Law to appear.)

It must always be remembered that an emotional reaction to sudden and unexpected fright is natural although quite variable in different individuals. It is only its persistence that is abnormal. This persistence however, is not due to the quality or gravity of the emotion itself, but is due to the fact that the state is so to speak fostered by the patient who has allowed himself to believe that he can no longer control every childish reaction which he shows, and thus persists in playing out the role he has assumed.

The following military cases should be studied in relation to the foregoing factors and to those which follow.

Acute Emotional Syndrome. While waiting for the assault of a village perched on the top of a hill, the despatch riders of the 46th R. I. placed themselves under a rudimentary shelter in the advanced trenches.

The regiment had just had the benefit of 6 weeks rest and had taken its position during the night. They had been there a few hours when a shell plunged into the shelter, struck and beheaded a man, and luckily for his neighbors buried itself in the soil without bursting. Almost all the survivors came to themselves immediately. One of them alone, a hair dresser in civil life, now a sergeant, came in great haste to the dressing station at about 150 metres distance downhill and sat cowering in a corner. There he gave free course to his emotion. He wept abundantly. He was agitated with intense trembling. It was not a faint tremor, but consisted of large oscillatory movements of the upper limbs and almost of his whole body.

Even after resting for a few moments his respiration was very rapid as well as his pulse, 150. He related in broken and hurried words what had just happened to him. He cursed the enemy, spoke of his beheaded comrade, of the assault which was imminent, of his comrades waiting for him. Visibly he was making great efforts to recover. He was helped by reassurance and stimulants.

Suddenly he got up and though still trembling, ran away to resume his post.

When he was seen two hours later a bullet had gone through his thigh.

Although his wound was not severe, he has succeeded in evading active service. Two years later he had not yet been sent back to the front.

These patients all show tremor at some time or another. Their tremor is wide in extent, and stops during distraction. Its differentia are fully gone into in my forthcoming book in the chapter on Tremor. It is very significant that the patient can be taught in a single sitting to control these provoked tremors, when the method of powerful faradism is intensively applied. In most instances the tremor can be got rid of without this unpleasant procedure, but the treatment then requires great skill on the part of the psychotherapist. For that matter so does the application of painful electric currents, the manner of its use being much more important than the fact of its application.

Perseverating Pseudo-emotivity. In many instances of pseudo-emotional behavior, the patients at first really suffered from uncontrollable severe emotional reactions due to toxic or fatigue states. They are still more often the result of emotion. The patients are perseverators, then, who having had formerly a real justification for their behavior, continue to think they are still justified in letting themselves give way in an exaggerated fashion to every solicitation. Most of them do not themselves realise that the physical state which caused their earlier disturbance has long ceased and that their reactions have become illegitimate. It is a delicate task to demonstrate to them their error and to persuade them to cooperate in their restoration to health.

Influences Adverse to Cure and Welfare of These Men. The manner in which this task must be approached is unfortunately dependent upon many considerations quite outside of the sphere of psychotherapy. Such are those of the policy of the army toward functional nervous diseases. Such is that of the policy of the country toward cases of cerebral commotion.

Each of these influences bring to bear upon the soldier powerful suggestions which may seriously interfere with his efforts to get well and which may indeed encourage his efforts to remain sick. Popular articles and conversations about "shell-shock" are most detrimental in this respect. They should be discouraged if not forbidden during the war at least, and if they are permitted, the newspapers should cooperate in refusing to print those not written by psychiatrists authorized by the war council to do so.

But even within these limitations it is possible to cure these men, and that perhaps without the enormous expenditure of money in the elaborations of such an organization as has been adopted in England in order to compensate for the grievous leakage which was permitted

during the first three years of the war on account of the attitude of the country toward functional nervous diseases.

Simulation of Emotivity. It must never be forgotten that the condition of emotionalism is apparently easy to simulate, and that such patients viewed superficially appear quite unfit for service. A number of instances of this syndrome, afterwards confessed to have been deliberately simulated, were returned among the prisoners of war repatriated as completely incapacitated for further service. Under ordinary conditions the opportunity of receiving confessions of this kind of course is not permitted, as it is not to the patient's interest to admit that he allowed himself during the war to remain unnecessarily in hospital by maintaining artificially an illness of which he could have got rid long before.

The Mechanism of Some Fear States. Everyone is familiar with the different ways in which different individuals react to impending accident. For instance when an automobilist precipitately crossing the street has to suddenly stop his car with the emergency brake in order to avoid a vehicle which he had not at first seen, some spectators may gasp with horror, some may shrink aside, some may even scream out. This is because their imagination pictures what might have happened had the brake not been applied. It may be called a morbid directioning of the imagination; it is the kind which produces timorousness or pessimism. Other spectators on the contrary, may be rather impressed by the speed and skill of the driver in averting the accident which might have happened to one less competent. This may be regarded as a wise directioning of the imagination. Other spectators may pass by with complete indifference. These are of two kinds. One kind are incapable of feeling emotion. They are the lymphatic or indifferent persons. They are not common. Far commoner is the type which is incapable of feeling emotion about what may happen to other people. It is only when they, so to speak, place themselves in the position where the accident might happen to them that they feel alarmed. These people are very numerous.

Most people however become so inured to the usual alarms of the current life that they cease to manifest, and often indeed cease to feel the emotions which alarming incidents first excited. The great majority of the soldiers find that their first dreads gradually cease. The cause of this is an intelligent use of the imagination, the man reflecting to himself that, so far from the chances of his being injured being considerable, it is indeed very slight at any given moment. Even when

he knows that in the long run he is bound to be killed or injured other motives can be brought to bear regarding each individual expedition. Of course, if he considers the number of men who have been killed without fighting at all or the number who have been killed in their first combat, he could feel only fear. But when, on the contrary, he considers the number of men who have survived a score of combats, and when he thinks of Guynemer who was successful in 54, he sees no reason for despair. The same reasoning is cogent in the case of the Infantry and few men feel that an impending battle is to be their last.

In the case of desperate enterprises however the case is a different one. Most of the men had they reflected upon this particular aspect of the case would recognize the high probability of their being killed. But other motives remove the fear of this. Such motives as the lust of battle, the desire for glory, feeling of indifference to danger, a high sense of duty, belief in a happy chance. Sometimes indeed the shame of appearing to be afraid. Each has its share in inducing the warlike spirit in the prospect of almost certain death.

Collective suggestion is a most important factor in maintaining high courage in troops. This, of course, largely depends upon the officers. However men who enter the Neurological Services on account of bombardment hysteria do so in the main because the cravenness of the individual has overpowered the influence of the collective morale. They can no longer be appealed to on the ground of *esprit de corps*. In some instances however, it is only because the man feels he has a legitimate excuse for abstaining from the dangers of battle. The important business of the neurologists is to be able to demonstrate to such men that the excuse in which they believe is not legitimate; that they are not indeed suffering from a physical disorder of the nerves but that they are mistaken with reference to the real motivation of their illness. With rational persons this is all that is necessary, but there are some men with whom reason is less powerful than the appeals of imitation and suggestion. The most powerful weapon against these men's disorders is the spirit or morale of the hospital such as has been so well illustrated in the preparatory treatment of the men at Salins. A full account is given in my book *Disorders of the Nervous System in Warfare* (Bealsiston to appear).

In some instances the men are accessible only to the direct effects of unpleasantness, being neither of a reasonable type nor amenable to gentle collective suggestion, and being imbued with a desire to escape the rigours of warfare, they can be appealed to best by a

rigorous treatment which shows them that the service has its compensations after all. There is more than a suspicion of dishonesty of intent in most of these cases, but it is not wise for the doctor to declare openly the guilty motive behind the men's behaviour. The man cannot become a good soldier unless he maintains his self-respect or perhaps rather the ability to hold up his head before his fellows. He does not mind feeling that the doctor knows he has not been quite honest with himself, but will be only too glad to have a chance of getting out of the affair without probable disgrace and he will do his very best to place himself in the recovered list for a doctor whose consideration he understands, and whose insight and firmness he respects.

However, it must not be forgotten that in very many men whose morale flinches, it does so because of a reduction of the resiliency of the organism, that is, physical wear and tear, which prevents the man from responding to a difficulty he formerly surmounted with comparative ease. The greatest attention must be paid at the beginning of each case to the signs of the milder functional incapacities of circulation, internal secretion, metabolism and lowered neurone reaction. Even the disorders of the associational systems must not be attributed to pithiatism. They may be dependent upon functional inadequacies of purely physical nature. An example of this mechanism is the following case extracted from my discussion of the management of confusional states read to the American Medical Psychological Association 1916.

A woman of 35 was referred by Dr. Ada Thomas because she became disturbed about some botanical investigation she had conducted successfully, which she could not seem to finally formulate although she had made a preliminary report to the satisfaction of superiors. She would keep on starting experiments, but they did not seem to go right. She felt dazed and as if everything was out of joint. The work seemed easy and yet she could not accomplish it. As there was neither insomnia nor loss of weight, she felt that her trouble was psychological. But her reflexes were exaggerated, her hand trembled, her eye-balls were prominent with congested lids and the breath was very foul. However she persisted that it was temperamental as she had had an attack as a teacher some years before, and thought that she was prone to it as a child. She was hyper-conscientious and had too much ambition for her strength.

Though her blood pressure was but 128 her diet was lacking in

succulence, and she had been taking extra milk but without causing constipation. Thinking that improved metabolism might help her I prescribed a week's vacation with golf, a more succulent diet, and a mixture of hormones. In a few days the blood pressure fell to 105, diastolic 55, and she "felt like doing nothing at all and without mind" so that the golf was stopped and she was put to bed. Whereupon the blood pressure after five days, slowly rose to normal, the reflexes diminished, the tissues were firmer, but the pulse rate mounted over 100, going to 120 some times and slight exophthalmos appeared with the sign of Moebius. There were no sweats, and the breath was less foul, she felt clear mentally. Mixed hormones were stopped. She was then given secretogen and advised to return to work the next week, which she has accomplished satisfactorily ever since.

That thyroid and adrenal disturbances must be quite usual in hyperemotive individuals we have experimental warrant a priori and indeed a considerable number of observations of long continued tachycardia show a morning maximum which points to hyperthyroidism. A detailed study of a series of these cases is much to be desired. The war provides an opportunity which should not be neglected.

It is only by thorough attention to the details of mental examination that one can pronounce upon the character of such manifestations, many of which can be successfully imitated, and many of which occur from a purely psychogenetic mechanism. Glaring examples are the Ganser syndrome, and some of the amnesia and dissociated states in which many clinicians have formerly shown great credulity. Too great caution can not be used against allowing oneself to find without due criticism some ill-understood syndrome which has filtered into the neurological literature from the garrulous report of some armchair clinician usually from beyond the Rhine. Even the law of regression of souvenirs has been shown to be without proper basis, as the beautiful study of post-commotional amnesia by Mairé and Pieron clearly demonstrates.

THE MANAGEMENT OF PSYCHO-NEUROSES IN THE CANADIAN ARMY

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THE management of the Psycho-Neuroses by the Canadian Army Medical Service, begins really in England and is carried on in Canada. In order to discuss the management of these conditions in the Canadian Army, however, it is necessary to consider the whole system that was in vogue under the Royal Army Medical Service in France. The Canadian Army Medical Service, as well as all parts of the Canadian Army in France, were an integral part of the British Army, and as such came directly under that organization.

It is not my intention to consider in detail the clinical form of the Psycho-Neuroses, but as is well known, these conditions, under the term "Shell-shock," quite early in the War became a very serious medico-military problem in the British Army as well as in the Armies of all the Allies—to say nothing of the armies of our enemy.

Owing chiefly to the fact that these conditions were not fully recognized in the beginning, many cases were evacuated to England which would not otherwise have been, and the depletion of manpower in the front line from this cause became a very serious item. Some confusion was, I think, also caused by the result of anatomical investigations carried out by Major Mott, who showed that in soldiers killed as result of explosions without showing external wounds, minute hemorrhages and multiple cell changes in the nervous system showed the effects of concussion and that the cause of death was in the nervous system. This condition, which was really shell concussion, was very soon confused with the clinical condition which received the apt term of "shell-shock," but which on closer examination was shown to be rather a physiological or psychological condition without any organic anatomical lesions. The first really systematic effort to handle this problem in France was the establishment of special neurological hospital in the casualty clearing line and the issuance in the summer of 1917 of the Army Form W-3436, and the instructions to Medical

Officers which accompanied it. This refers to officers and other ranks who without any physical wound became non-effective from physical conditions claimed or presumed to have originated from the effects of British or enemy weapons in action. The medical officer who in the first instance dealt with such a case, where it was necessary to transfer him to the special hospital which had been organized in the casualty clearing line, was instructed not to record any diagnosis, but to enter on the field medical card the letters NYDN (not yet diagnosed nervous). The field ambulance through which this individual was evacuated was responsible for bringing him to the special hospital. These hospitals very soon got the name of "Shell-shock Hospitals." If any case inadvertently arrived at the Base without having passed through the special hospital, the officer commanding the base hospital had to retain that case and notify the local administrator of medical services of the army concerned.

The expression "shell-shock" under no circumstances was allowed to be made use of verbally, or be recorded in any regimental or casualty report, or in any hospital or any medical document, except in cases so classified by the order of the officer commanding the special hospital.

In all these cases admitted to the special hospitals and in those who through inadvertence slipped through to the Base hospitals, the Army form W-3436 had to be made out. This form after giving the man's name, number, rank and unit, stated that the individual had been admitted to the special hospital on such and such a date, through such and such a field ambulance. A description of his condition on admission followed, with a copy of the man's statement as to how he came by that condition. This was sent immediately to the officer commanding the man's unit, who, after looking into the case gave a written statement whether or not, in his opinion, the man had been under exceptional exposure (that is, exposure of a specific nature more intense or prolonged than that in which others in the same area of operations endured without being similarly affected thereby), specifying briefly the nature of that exposure. In the case where this exposure was regarded as not exceptional, this form W-3436 was sent by the O. C. of the unit directly to the "A" (Adjutant's) Branch of the division, and it then became a matter for Army Headquarters' investigation. If the exposure was regarded as exceptional, the form was returned by the O. C. of the unit to the O. C. of the special hospital, who was then responsible for ascertaining that any points which

appeared to require investigation were brought to the notice of the Army Headquarters before the case was disposed of. It was his duty also to notify the D. A. G. of the 3rd. Echelon General Headquarters of the classification and final disposition of each case.

The work done in these special hospitals was wonderfully effective. The following is a report for the month of August from No. 3 Canadian Stationary Hospital, where the special Neurological work was being done by Captains F. Dillon and Lawson—both the R. A. M. C.

Number of Cases admitted during August, 1917 132

Relative proportions of Cases Admitted:

Shell Shock Wound	75 or 56.8%
Neurasthenia Sick	57 or 43.2%

Disposal of Shell Shock Wound Cases:

To Duty	64 or 85.3%
To Base	11 or 14.7%

Disposal of Neurasthenia Cases:

To Duty	32 or 56.9%
To Base	25 or 43.1%

Disposal of Both Classes of Cases Combined:

To Duty	96 or 72.7%
To Base	36 or 27.3%

TOTALS FOR FOUR MONTHS:

April, May, June, July, 1917, before the introduction of Army Form W-3436.

Admissions	1341
Discharged from Hospitals	1173
To Duty	938 or 79%
To Base	235 or 21%
"Return" Cases	44 or 4.6%

It will be seen from the above analysis that 43% of the cases admitted into the "Shell-shock" Special Hospital are cases of Neurasthenia, that is, not caused by exceptional exposure but individuals

presumably showing relative impairment of power of endurance to the ordinary strain of war. Of these, 56% were sufficiently restored by treatment to be sent back to duty.

The remaining 57% of admissions are cases of shell-shock wound. These are the ordinary type of individual who have been subjected to exceptional exposure. In these you will see the prognosis is very much more hopeful, 85% being ultimately capable of being returned to duty. Of both classes combined, (the shell-shock wound and Neurasthenia) about 72 to 79% of admissions into the shell-shock division were made fit by treatment to return to duty. The remaining 20% to 30% were transferred to special hospitals at the base. About 50% of these were returned to some sort of duty in France. The remaining 50%, that is, 10% or 15% of the total, were evacuated to England. For a long time these went to the ordinary general hospitals. In the organic cases which required specialist's attention, such as Orthopaedic cases or wounds of the brain, the sorting out was done in France and the cases were transferred directly to special hospitals in England. It was a very long time indeed before the same recognition was given to the psycho-neuroses. The result was that they were passed from one general hospital to another, and by the time they did reach a Specialist, their condition was very firmly fixed and difficult to influence.

The Canadian Army Medical Service has, I believe, the honour of being the first to organize a Special Hospital for the treatment of these cases. This was established at Ramsgate in November, 1915, and was designed to treat both Orthopaedic and Neurological cases. The Granville Hotel was taken over and turned into a hospital. Its special facilities in the way of hot air baths, electrical baths, turkish and Russian baths and large plunge already established in time of peace, made an excellent basis from which to develop a mechanical therapy. We shortly added to this as an annex the Chatham School with its technical workshops, its grounds and gardens, all of which were used and developed for occupational therapy. Instructors in all lines of occupation, from motor-mechanics to cigarette-rolling, were picked out from among the wounded patients, and a very active occupational therapy was instituted. The beneficial result was most evident from the start. The Commanding Officer's Orderly Room almost went out of business. Breaches of discipline became very infrequent, and the morale among the patients was very much improved. Besides this all the splints and mechanical apparatus needed

in the hospital were made by the patients. In fact operating room furniture was made for other hospitals as well as our own and our surgeons had any special instruments made on the spot.

In the early days of this hospital, owing to its unique character and the fact that these patients suffering from functional disturbances of the nervous system had been so long in other hospitals where conditions were not understood, the clinical material was very extraordinary and the results obtained by treatment most striking.

In my opinion, it would have been advisable in the Canadian Medical Service in England, to have developed this one, or possibly two, Special Neurological Hospitals, and to have had all suitable cases segregated. However, in spite of my recommendations, the authorities did not consider this advisable, and the result was several smaller Neurological Clinics developed in general hospitals wherever there happened to be a medical officer with Neuro-Psychiatric training or inclinations. As far as the treatment of the men was concerned, this did not make any material difference, but owing to the relatively small size of the majority of these clinics it was not possible to use them to any extent as schools of instruction for medical officers in this line of work. This has recently, I believe, been remedied by sending Canadian Medical Officers for course of instruction to some of the British Special Hospitals.

To the number of War Neurotics that were evacuated to England from the Special Hospitals in France, there were always added a certain number who developed in England either previous to their going to France or on recovery from wounds or exposure to gas, and these were admitted to the Special Hospitals in England. It is impossible to form an estimate of what percentage were returned to duty from these Special Hospitals owing to the constantly varying conditions. In the early part of 1917, from the Granville Canadian Hospital, upwards of 60% of the patients who were admitted were returned to the front. With the establishment and proper organization of the Special Hospitals in France, this percentage was much diminished at a later period, as only the least hopeful cases ever reached England.

THE MANAGEMENT OF THE WAR NEUROSES IN CANADA

Major General Fotheringham, the Director General of Medical Services in Canada, who before the war was Associate Professor in Medicine at Toronto University, has shown the greatest appreciation

of the importance of this work and the difficulties to be met with in this department of the Medical Service, and has given us at all times his utmost support.

The principles underlying the treatment of these patients in Canada may be summarized as follows:—

- 1—The direct transference of all patients of this type coming from Overseas into Special Neurological Hospitals.
- 2—The segregation of patients of this type who had already returned to Canada for the purpose of treatment into these Special Hospitals, under the care of specially trained Medical Officers.
- 3—The retention of these patients in these hospitals until:—
 - (a) They are fit for some form of Military duty.
 - (b) They are fit to pass under their own control.
 - (c) They are discharged as having come to a termination of treatment.
- 4—At the termination of treatment, these patients appear before a standing Medical Board composed of Medical Officers of the Special Neurological Institution, and its decision is final in regard to:—
 - 1—(a) Either return to duty and re-classification.
 - 2—(b) Or discharge from service.

The re-classification of the soldier returned to duty from a Neurological hospital may not be altered except on the recommendation of the standing of the Medical Board of that Hospital, or of one of the other Neurological Hospitals.
- 5—In the case of a man discharged from a Neurological Centre to his own control, whose disability later recurs, we have arranged with the Department of Soldiers' Civil Re-Establishment that he be returned to the special Neurological Hospital for treatment. There is thus established a continuity of treatment and supervision which has been found most effective.
- 6—On discharge, the pensionable disability, if any exists, estimated by the Special Medical Officers who have had this patient under observation, who thus act as advisors to the Pension Commissioners in these cases.

Special Neurological Centres have been established in connection with the Military Hospital at Montreal, Toronto, Winnipeg and Vancouver. A fifth one is in the process of being opened at Halifax. These Centres serve their surrounding districts.

It is taken as an axiom that all functional nervous disorders are curable—provided that the desire for cure is present in the patient. It is, therefore, ordered that no soldier suffering from a gross objective functional disability shall be discharged from the Army. All such cases which continue obstinately resistant to treatment shall be sent to the Dominion Neurological Centre at Montreal for observation and final disposal. Hysterical conditions in patients warrant no pension or gratuity. Where hysterical disability is associated with lesions due to organic diseases, the hysterical manifestations are not to be taken in account in estimating the amount of pension. Well marked Neurasthenic conditions—even without objective disturbances—may receive a small gratuity, but the feeling is that it is not wise to give such cases a pension.

These special centres are located in specially planned pavillions which are a part of the General Military Hospital, so that we have available all laboratory assistance. Consultation with Orthopaedic Surgeons or any of the other Specialists is convenient, and the physiotherapeutic department with its baths, massage, electrical treatment and gymnasium are at our disposal.

The work that is being done by the Medical Officers in these Special Hospitals has been very satisfactory, and one can say that in this class of patient, which is probably the most difficult to deal with, they are turning these men out fit for civil life. The following is a synopsis of the monthly report of cases discharged during one month from a single Military Neurological Centre:—During the month 47 patients were discharged, 8 of these were suffering from organic injury, while some of these latter were improved and their pensionability lessened, not much was to be expected, and these cases will not be considered in the following estimate:—

39 patients who had suffered from Psycho-genetic disability were discharged during the month. The average estimated disability on admission in these cases was 67%. The average stay in hospital prior to their admission to the Neurological Centre was 15 months. The average disability for civil life on discharge from Neurological Centres was nil. 67% disability represents in pension money \$390.00 a year—supposing the man's rank is a private, and he is unmarried—so that the saving per annum, for one month's work in this Neurological centre, amounted at the lowest estimate to \$15,210.00, to say nothing of the gain to the country in turning these men back capable of productive occupation.

REVIVALS, SEX AND HOLY GHOST

BY THEODORE SCHROEDER

SOONER or later all students of genetic psychology must face the important problem of supplying a psychogenetic understanding of religious experience, and of "spiritual regeneration." The remaining outline-descriptions of such movements as the Great New England Awakening will then seem hopelessly inadequate. We may read of jumping and shrieking, rolling and swooning, shouting and fainting; of laughing and catalepsy, wailing and singing; and of "inner voices" and "spiritual visions," but these are mere word symbols for that which is to be explained psychogenetically.

If we are to understand these "mysterious operations of the Holy Ghost" and their resultant "inward miracle of Grace" we must have more detailed observation and more exact descriptions. Of course, the best of all would be the re-enactment of those scenes under the very eyes of observing psychologists. Then, in terms of what is already known we might be able to explain and describe that "miraculous regeneration" by which the individual is invested with an instalment of divinity.

As a boy I attended a few western camp-meetings, but the uncritical observations of that period, and the present memory of these are both inadequate for present purposes. I only recall that we youngsters all had a conviction that at camp-meetings "more souls are made than saved." I thought of Billy Sunday's revivals; but these are too consciously controlled to give the "Holy Ghost" sufficient freedom to perform such unseemly miracles as accompanied the work of Jonathan Edwards and his immediate successors. It is in its most exaggerated expression that one can hope to get the best view of what is going on. I observed another revival¹ but found it void of that "divine spark" and of everything that distinguished the Edwardian awakening. In the midst of such difficulties some one told me of revivals conducted by several negro evangelists, each rechristened

1. Hours with a revivalist. A report from the psychologic viewpoint * * * with a bibliography of the author's essays on the "Etiogenesis of Religion," New York, Truth Seeker Co., 1917. Repub. from: *Seven Arts*, Sept., 1917, and *Truth Seeker*, 44: 577-9

"The Colored Billy Sunday." I was assured that there I could see a reproduction of all that the New England revivalists had produced. At last my hopes were not disappointed.

GETTING RIGHT WITH THE AUDIENCE

First, I went to the pastor's home. I told him that I was a "heathen" void of religion, but interested in the scientific study of religion. With equal frankness, I told him of my tentative working hypothesis, viz: that religious experience is essentially a sexual ecstasy. He demurred. Then the parson was asked to point out the difference between a sexual ecstasy and the work of the Holy Ghost. He assured me that there was all the difference in the world, but that the difference could not be described. It must be experienced to be understood. I deemed it inexpedient to press the matter further. At another time I may report a number of interviews wherein this subject was discussed with some of his converts and with some of the clergy who assisted him.

In my first evening at this church, arm in arm, the parson and I walked up the aisle. Declining a seat behind the pulpit I sat by the side of it, some distance away. I was the only white person in the audience of about 500 negroes. The parson told the audience why his "distinguished white friend" was present, and poked fun at my thinking that I could learn anything about religion by scientific study. He told them that I claimed to have no religion in me, but he knew better. During the opening hymn he had seen my foot patting time with the music, and therefrom he knew that I was ignorant of how much of the Holy Ghost I really carried around. Practically every evening some good natured belittling of my scientific study of religion contributed to the mirth of the audience, and I believe promoted its comfortable adjustment to my presence.

It is with deepest regret that I confess my inability to suggest a vivid, living, moving picture of the extraordinary scenes that I witnessed. At the critical periods, there was so much excitement in various parts of the church and all at the same moments, that no pen can portray it. Therefore I must content myself with describing in a fragmentary way the behavior of only a few of the many persons who came "under the power of the Holy Ghost." Those who possess a very vivid imagination may, with a multiplication of the individuals whom I will describe, succeed in reconstructing something like

the real happenings. First, however, I will record a few observations, general in character.

WHY REVIVALS REVIVE

One of my first surprises was the discovery that the greatest religious excitement did not come into being at the time when the pastor was most energetic in his denunciation of sin and satan. On the contrary, the greatest emotional crises came into being, when the revivalist was least concerned with theology or morals, and most completely abandoned to the expression of his own intense emotions. At their highest, his emotions seemed quite void of ideational content. He simply jumped and bawled. I can adequately describe his apparent condition by reference to only one other human experience. It seemed to me very much like the uttermost of sexual orgasm.

The mere example of the pastor in abandoning all emotional self-restraint seemed to bring results. The prestige of the clergyman, the feelings of sanctity associated with the place, and the superhuman interpretation generally accorded to such events, seemed to lend courage for the liberation of repressed emotions. All this combined with the pastor's example eliminated from the audience the inhibitory fear of social custom, and of possible social disapproval. Billy Sunday, by denouncing the first outbreak of emotionalism in his audience, keeps the inhibitory influence effective. Among these negroes, as elsewhere, I noticed a like subjectivism manifesting itself in the less violent responses of the audience. Very often these spontaneous exclamations, both as to content and timeliness, were obviously unresponsive to the sentiments then being expressed in sermon, song or prayer. In other words, many of the minor manifestations of emotions came as accompaniments of an independent train of phantasy.

THE PASTOR'S TECHNIQUE

The evening services lasted from 8 p. m. until midnight. They began with a hymn during which we all stood up and each held the hands of his neighbors. The revivalist started his sermon in some narrative of commonplace experiences of the day. A bit of humor and laughter often promoted an emotional unity between pastor and audience. After ten minutes or so, by easy stages the parson would change his discourse to some religious or moral lesson, or comment in some rambling way upon a scripture passage. As the evangelist

grew more serious the laughter from his hearers changed to amens, groans, or humming, accompanied by the rhythmic tapping of the feet, movements of the head, and clapping of the hands. As the pastor became still more excited, as if quite unconscious of the fact, his voice lapsed into a sing song monotonous chanting rhythmic intonation, adapted in a measure to an existing responsive murmur from some of his audience. As some phrase of his suggested the words of a song his chanting merged by almost imperceptible stages, into some familiar hymn. The crowd soon took up the refrain and presently all were singing quite spontaneously and vigorously, without any sudden interruption in the pastor's performance or any announcement that music was in order. It just came because the emotions were properly attuned and guided. As the singing progressed, the pastor's voice sometimes became spasmodic and his short exclamations of some disconnected words of the song did little more than to offer a discordant rhythmic accentuation of the emotional expression of the crowd. This was frequently accompanied by the most violent hand clapping or stamping on the platform. As if by an unconscious automatism there came a realization that the time had come for a change in the energetic manifestations.

Too great a prolongation of the same kind of noise, tends to lose its stimulating power in inverse ratio to its duration and will eventually have the effect of only a monotonous rumble and cease to satisfy the craving for stimulation. Hence a frequent change in the expression of exuberance is necessary for efficient continuing stimulation. The pastor's voice was lowered as he sang, and soon reduced to a mere humming through the nostrils, the mouth being tightly closed. Sometimes this was accompanied by increased bodily movements. The crowd followed suit and the song soon faded out of existence. The pastor, even before the humming had died away, gradually merged from singing into the continuation of his discourse. At first this was mere monotonous jerky articulations. Later the ordinary intonations of his discourse reappeared. All this change seemed to be less the product of conscious design than of subconscious guidance of exertion.

After a couple of such songs the pastor's voice became still more intense and tremulous. His hand clapping became more frequent and more violent. Also he oftener indulged in stamping and in more frequent and higher jumping. Then he seemed almost to lose control of his voice. His exclamations became ejaculatory, spasmodic

and at times mere repetitions over and over of one or a few words. The lines of his face now made him look like one beside himself with some sort of all obsessing emotion or passion. Frenzy and the Holy Ghost operate much alike. The large thick lips trembled as he fairly howled in husky voice, something which was not even an intelligible word or syllable. Shrieks from the audience broke in; many jumped high from the floor; one stood upon a chair and gesticulated wildly; arms flew through the air; chairs were tipped over; there was great commotion in every part of the church. Pandemonium reigned. "The Holy Spirit" seized several sisters and threw them to the ground. Others were impelled to sit on the lap of their neighbors. Of all this, the parson seemed to be wholly oblivious. He too had passed into a world of rapturous phantasy so thoroughly obsessing that he appeared wholly unconcerned and probably was inhibited from becoming conscious of all that was happening. The pentecostal service was on and the Holy Ghost was busy, very busy, intensely absorbingly busy; that was all that mattered.

SERMON ON THE PRODIGALS

On another night the sermon was upon the prodigal son and daughter. The pastor pictured in elaborate detail many imaginary trials and tribulations experienced by the prodigals and by the anxious mother and father, before and while forgiving and welcoming the prodigals back to home and heaven. The pastor started in a mild conversational tone, but soon the voice grew louder. Quite gradually and apparently by an unconscious automatism, the voice at times assumed the sing song of a monotonous inflection, which I found a characteristic of many negro religious enthusiasts. Then by like processes he lapsed back to his ordinary form of sermon delivery. To me it appears as if this relatively monotonous intonation is probably the natural forerunner of the chanting still heard in many churches, where of course, it is modified by the refinement of musical harmonial technique, in a consciously improved imitation of the more primitive and passional chant.

As the sermon proceeded the parson grew warm and the perspiration began to run down his very black and very fat face and neck. His voice grew more hoarse and loud. Occasionally a mere shout at the very top of his voice was interjected by himself; then came a hand clap or two. The louder tones of the primitive chant become more tremulous; sometimes they were more like wordless

bawls at the very loudest of his ability, with the mouth stretched to the uttermost. The arms then were horizontal from the shoulder, with the elbows bent upright and fists tightly clenched. Moments of relaxation came. The former chant merged into a hymn, accompanied by rhythmic accentuation through the clapping of the hands. Then came also the singing accompaniment of the congregation. The hymn being ended, the "sermon" was resumed even more vociferously than before. Now the pastor stamped his foot vigorously upon the platform. Then with "a tear in his voice" and obviously under the very greatest strain of most extraordinary emotion, he begged the wayward sinning girl whose shoes have been kept under her male friend's bed, to come back to mother, to mother to—m-o-thh-errr. Before this, occasional shouts and groans had been interjected by the audience. Now several young women began to shriek, jump, throw their arms in the air, writhe a moment and then they fell back to the chair or over a neighbor's lap. Some young men accustomed to officiate in such cases gave first aid to those "thrown down by the Holy Spirit."

BEHAVIOR OF THE POSSESSED

Not far from me was a young woman who gave signs of coming under the influence of "the spirit." The semi-official male attendant grabbed her arms from behind so she could injure no one with her elbows or fists, as she twisted back and forth convulsively. Her eyes were shut, the man pulled her arms straight at an angle of 45 degrees to her body. She yielded to his greater strength, or responded to an opportunity for satisfying a personal impulse. At any rate, she dropped her head onto his chest and neck, then rested quietly, almost in his embrace. In a little while another young man tried to open her clenched fists but in vain. They sought to seat her, but her body would not bend. They tried to push her arms down nearer to her body but they were rigid. This method was abandoned. She was then pulled out into the aisle, her body still rigid, her feet dragging on the ground. Once in the aisle, with one man holding her at the shoulders, another picked up her feet, and rigid as a board she was carried from the room.² Meanwhile the services were continued as though nothing had happened. Others had shrieked and fallen, and had been restored, or had been carried out, and I could almost read

2. For the sexual import of this catalepsy see; *Psycho Analytic Review*, 2:352.

in the elated expectant faces of the attendants a disposition to shout "next."

Another evening a young woman of about 17 years arose and walked to the nearby space between the altar and the pews. Her gait was a bit uncertain and she began to gesticulate, rather slowly at first—then more violently, all the while preserving rhythmic movements of the body in harmony with the singing. Soon she sang out of time and out of tune. Then came some convulsive shrieks. Next there appeared an evident loss of the control of other bodily muscles. Her gait became more uncertain; she staggered; the arms were in the meanwhile being flourished in a lively manner and she seemed to be trying to embrace something not visible. Now she collapsed entirely, depositing herself insecurely in the lap of a girl seated in a chair near her. Then she fell, knocking over a couple of empty chairs. On the floor she continued to twist and wriggle. Several young men rushed to her aid. She was picked up and supported by the willing arms of the young men, but with her feet resting on the floor, they straightened out her arms and held them at right angles to her body, evidently to prevent her from hurting any one with her tightly clenched fists, as she continued to twist herself rather violently to and fro. Her efforts did not appear to be directed toward a release of herself. She seemed rather to be bracing herself for a more effective and satisfactory muscle-tension. A momentary calm came over her, but it was only momentary. Then she collapsed. The weight of her body caused some lowering of it as she brought her head forward and drew up her knees. She was given support by the young men from her shoulders to her hips. They were almost carrying her. Now came a violent straightening out on her part. The head went back, the hips were thrust forward and upward, her heels violently struck the floor. She strained a few moments and then began again the rhythmic thumping of the floor with her heels; both heels simultaneously kept time with the intensely rhythmical but discordant singing which was going on. Now the energy of her movements seemed to be rapidly waning and soon were ended. The young men who had been trying to unclinch her fists at last succeeded. As the fingers straightened out one of the men gently slapped her open palm a few times with his own palm. The young woman seemed to be regaining consciousness of her relation to her environment. Wilted and weak she was guided to a nearby chair where she seated herself in a limp and very relaxed condition. Her body dropped forward; her head

leaned to one side, and the eyes were still nearly closed. She turned aside, put her elbow on an adjoining chair and covered her eyes with her hands, while she perhaps wondered what had happened to her, or whether others understood her secret; or she may have been trying to fathom the innermost secrets of the departing "Holy Spirit." After ten or fifteen minutes she sat more erect. Her eyes were now wide open and a contented calm expression was on her face as she looked out upon the next "wrestler with the spirit." Beyond a slight rhythmic movement of the foot, beating time to the singing she seemed not to have any further active interest in the unusual performance. Perhaps she was enjoying that peace which passeth all understanding.

HOLY GHOST GETS BUSIER

But we must have a still more intimate personal observation of the operations of the "Holy Ghost."

Next came a shriek from the other side, and an attractive young yellow girl came forward with a quick vigorous step and upraised arms. She staggered, then rushed across the open space before the altar and back again. She staggered again and halted at the head of the aisle. Her arms went straight up as she jumped high in the air and uttered a terrible shriek. As she landed on her feet she ran swiftly down the aisle into the arms of one of a group of young men who had just finished their services to another girl who had fallen among the chairs. On the young man's face, as he held her firmly in his arms, was a smile which seemed to express sympathetic understanding and amused indulgence. Soon, the internal storm was over. The young woman was released and later as I looked back her face was calm and placid as though nothing had happened. Thereafter she was only a calm and interested spectator of the excitement going on all about her. From now on she was among them but was obviously not of them.

Again, I was seated in the front row of seats by the side of the pulpit when from behind me I heard shrieks, falling chairs and much commotion. Not wishing to be too conspicuously curious, I only turned my head a little for a few moments and saw that several more young women had been seized by the "Holy Spirit," had been thrown to the floor and were receiving "first aid" from the young men. The singing was dying out but foot tapping continued as an accompaniment to the exhortation of the parson.

Here at my left, a woman of about fifty gave signs of restless-

ness and great excitement. Now she got up to testify for Jesus and with majestic stride, rythmically responsive to singing, her head high up and bent as far back as possible, her arms sometimes swinging, and again momentarily folded across the breast, she proceeded in a shrieking excited voice to "bear her testimony." Twice she went across the floor and back, her voice and gait growing more uncertain. As she approached her seat the second time she shrieked at her loudest: "I am *with* God and *Jesus is in me*," and so she half fell and half placed herself in her chair. Now for the first time her head dropped to the front. She brought her arms forward as if to embrace some visible being, then folded them tightly over her breasts, gave her body a few vigorous wiggles and the "Holy Ghost" had flown. In a few minutes she resumed her former attitude, beat time mildly when the singing was on and otherwise seemed quite unconcerned about her surroundings.

At the front was a dusky young woman wrestling with the spirits. Her arms were folded tightly over her breast; her eyes were closed and her head hung forward, her body swaying greatly from side to side. On either side sat a colored woman. Each put an arm tenderly around the back of this spiritually controlled, bodily unstable sister and they placed their other hands upon the folded arms of the possessed damsel. So, by exerting a firm yet gentle influence upon the body, the "Holy Spirit" was seemingly prevented from producing the more violent manifestations which were then being exhibited through others at the rear of the church.

The hands of the supporting sisters probably had the effect of keeping the "possessed sister" too conscious of her relation to her environment, to permit of a total abandonment to the world of ecstasy and phantasy, or to its subconscious emotional compulsion. One colored man explained to me that the reason why these manifestations appeared more frequently in the young women was because the women have less physical strength to resist. The above incident suggest that the visitation and control of the "Spirit" was interrupted by the timely pressure of the neighboring sisters arms, which partially awoke the victim from her reverie and again made her so conscious of her environment, as to inhibit conduct which would then seem very unbecoming, very indecorous.

HOLY GHOST AT CLOSE RANGE

I sat at the side of the pulpit facing an open space in front of the

pulpit. From the seats at the opposite end of the open space a squeaky voice pierced the din of the battle with sin and satan and exclaimed "praise the Lord." Then a lady, appearing to be over fifty years of age, emerged from the seats and went jumping into the open space keeping time with the music and trying to do a little singing herself. Her attack seemed less violent than that of the younger sisters, and so far had the appearance of being more under the control of a conscious will. She was old and the muscles are perhaps a little stiff. She could not squat so low nor jump so high as the rest. She seemed a little artificial in her way of jumping about. The Holy Ghost seemingly was unwilling or unable to overcome the limitations of the body. To me it was almost pathetically grotesque, but the subsequent events showed that it did not impress others so. The old lady jumped about as sprightly as was possible for one of her age, yet her movements had an element of awkwardness and angularity. I also noticed that none of the young men went to steady her body during the jumping as in similar situation they aided some younger women. The old lady's awkward movements in jumping were so manifestly necessitated by some compulsion for a pelvic movement that probably many must have gotten from her a sexual suggestion implicating an invisible partner.

It is to this fact that I ascribe the result. With nothing going on other than a rather mild and usual singing, and the sight of this old woman's "superhuman" joy (manifested in her face and by her pelvic movement) there was produced among those around the altar, who had best opportunity for seeing her, the most extraordinary scene of the evening. In a short time a half dozen were here seized by the "Holy Spirit" and they shouted and leaped with joy most extravagantly. The commotion and excitement then spread to other parts of the audience where many others were "thrown down." The shrieks of these became mingled with those of some men who also became "Spiritually" happy. This scene even more than the others is far beyond my capacity to describe. The nearest approximation would be a lot of half intoxicated students celebrating a football victory. It might have been a riot or a madhouse medley. So I must content myself with describing a few of my neighbors.

Two or three chairs to my right, also in the front row of seats, sat a plump young molatto woman about 22 years of age. Suddenly

she shrieked and jumped into the open space in front of her. It seemed as though some impulse within had been suppressed too long and a sudden explosion was the result. There was commotion among the women. The jumper had some uncertain twists and movements of her body and for want of sufficient ability for self-control, she seemed in danger of falling. The regular assistants to the "possessed" were all busy, so I sprang to the rescue. I grabbed her left wrist in my left hand and placed my right arm at her back to steady her body. Some women attempted assistance but gave way at her right to a young colored man who held the right wrist in his right hand. In the meantime the "possessed one" regained a relative poise in a more regulated and rythmical jumping. We, the mulatto aid and myself, removed our arms from her back and got hold of her arms up close to the body. Now we guided her firmly in a perfectly upright position, while she jumped ever harder and higher, her head back, and her eyes in a fixed and glassy stare toward the ceiling. The girl had unusually large mamma, covered only with thin underclothing and a flimsy silk shirt waist. As she jumped her breasts flopped violently and conspicuously. Near by was seated a young woman who had wrestled with the "Holy Spirit" a few nights before and to-night sat calmly but with a beaming, satisfied expression on her face. Otherwise she had remained unmoved by the emotional scenes around her. She now came forward as if to protect my modesty from shock, and tried repeatedly to pull and fasten the girl's coat over a doubly heaving double sized bosom. But the coat could not be made to stay buttoned.

Meanwhile the bodily motions and the occasional scream had about reached the climax of her possibilities. Her breathing was loud, spasmodic and uncertain. The time for a last supreme dying effort had arrived. With a shriek, more despairing, if possible, than any before, she straightening herself as in final desperation, throwing back her head and shoulders, so that her weight was difficult to sustain with our present hold. Through her backward leaning body, simultaneously her pelvis came most vigorously forward and upward. Women came to our aid to sustain the sinking body as she twisted and wriggled as if to compel a release of our hold on her arms. Then she grew rigid for a few moments, followed by a few spasmodic pelvic movements, but with decreasing vigor. Now it was apparent that the "Holy Spirit" was leaving her. Her head came forward and she leaned against me seemingly indifferent to all around, her body

still quite rigid. Some were endeavoring in vain to open her tightly clenched fists. Others had begun to fan her. Some official "first aiders" having been released from duty elsewhere now insisted upon replacing me in the matter of ministering to the "glorified one." I yielded and in a little while she was seated calm and contented in her old place. In the meantime I busied myself with my immediate neighbor, whose hand I had held during the general hand-holding at the beginning. She went through similar but milder experiences.

CONCLUSION

There are other observations that I would like to report, especially those relating to the men. The same is true of some evidence that gives special support to my concluding remarks. However, one cannot tell in one essay all that one knows. Therefore, I content myself with a few concluding general observations impressed upon my mind by the scenes so inadequately described.

The foregoing revival observations can be approached with varying predispositions, and accordingly will receive different interpretations. The good orthodox Christian folk, who give support to revival missions held by all kinds of Billy Sunday's must, of course, find herein something to support their own need for a Holy Ghost, as a compensation for some feeling of inferiority probably based upon feelings of shame and excessive consciousness of personal sin. Among these we still find further variations of attitude.

If their feeling of shame or inferiority is great, then the need for superhuman support will be equally great. If, therefore, they strongly desire to be moved and supported as vigorously as were these negresses, or if they have already had similar experiences to which they have given mystical interpretations, they will see in these subconsciously determined performances very conclusive evidence of the operation of the "Holy Ghost," or of some other superhuman agency. Likewise, such persons will refer disparagingly to the less demonstrative, the more luke-warm convert, and must pity or denounce the cold "materialist" who seeks to explain such experiences on a psychophysical basis. The disparaging pity or denunciation, is a manner of attaining a compensatory consciousness of superiority over the ungodly ones. The degree of intensity of their emotional conflicts and its compensatory mystical interpretation, now becomes the exact measure of their emotional aversion to "medical materialism."

Many Christian mystics there are whose emotional disturbances are relatively mild. These will necessarily disparage all "excesses" such as I have described, as being manifestations of the "abnormal." They believe only in "sane mysticism," in "normal religion," in that "sweet calm communion with God;" that constant superhuman influence and personal guidance; that "ever-present consciousness of grace" which "giveth a peace that passeth all understanding." The extravagances of the "abnormal" they must disparage as a means of securing their own compensatory consciousness of superiority in "normality." And yet, when the divine rapture is over with, one cannot easily distinguish most of those who have gone through the above described experience, from the average of negroes who have never been so favored. Neither can any mystic point out an essential and fundamental difference in the psychologic quality (as distinguished from quantity and intensiveness), between the "abnormal" and the "normal sane" sort of religious experience. There is an obvious difference in the intensity of that which is experienced, accompanied by an obvious difference in the degrees to which the "abnormal" are for the time being obsessed by their subjective states, and correspondingly inhibited from guidance in conduct by a consciousness of the environment. Expressed from an opposite viewpoint we may say that there is an obvious difference in the degree to which the "sane normal" experience of religion is inhibited from going the same length as others. He is so inhibited by the persistence of his consciousness of the demands of his ordinary environment. There are also varying degrees of psycho-genetic consciousness, each in turn accompanied by varying degrees of shame or by an attendant feeling of inferiority. All these factors necessarily operate in some to check the more extravagant manifestations of impulsive tendencies. That such persons are able to remain more conscious of the environment only means that their impulses are relatively less imperative, their energies are less repressed. Religion as personal experience fades out, merges into pure secularism, when our libido is unrepressed through wholesome and continuous normal and satisfying self-expression. Then we only entertain more or less scientific opinions about subjects of religion, and we no longer have a religion of personal experience.

Very different from the above described various mystical interpretations is the result if we seek to explain these revival experiences from the standpoint of one who has no intensified erotism due

to repression or emotional conflict, and no inferiority complex that requires compensation through superphysical or superhuman attachments. Then we may co-ordinate the observed facts of revival experience with what we know of the behavior of human energy as observed in the field of religious and sexual psychology. Thus some are incapacitated from seeing in these revival phenomena, as described above, anything but a psychic sexual orgasm.

From this point of view the varieties of physical manifestations of revival excitement are explainable by varying degrees of sexual repression, sensitiveness, or shame, and the resultant varying degrees of intensity in the sexual excitement and of the muscles involved in the spasms. So we find a psychologic unity between Holy Rollers, Holy Jumpers, Angel Dancers, Holy Jerkers, Divine Quakers, Shaking Quakers, Dancing Dervishes and the *Dance du Ventre*.³ So likewise in the lesser intensity of "sane normal" religious experiences, we see only a milder stimulus perhaps not impelled to the orgasmic stage, and accordingly more largely conscious of environmental relations. Thus we explain those persons who cannot wholly lose themselves in ecstatic reverie, to the exclusion of all that sense of propriety and fitness which the consciousness of the environment imposes. When this consciousness is lost the conduct is no longer a response to the environment, nor necessarily in any way in harmony with it. Under the influence of such more intense compulsion "every one goes it alone"—acts out the needs of his or her own autonomic apparatus.

I have considerable evidence to be adduced later on to show that even some of such "normal" experiencing persons are at the very times of their experience conscious of the sexual involvement and character of their religious ecstasies. Others, with perhaps more emotional conflicts about sex, succeed better in excluding from consciousness the sexual sources and factors of their experience. Among these latter, some appear to do this quite permanently. Others have been found who later became aware of the sexual nature of their conversion experience. All this part of the discussion must be left for another time.

3. See:—The interpretation of this by Ida Craddock, mystic author of: *Heavenly Bridegrooms*. *Alienist and Neurologist*, 1916-1917.

THE PSYCHOPATHOLOGIST AND HIS RESPONSIBILITY

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THE Psychopathological Association meets this year under circumstances in striking contrast with those of the last annual meeting; then in full war, and at one of the most critical periods of the war, now at the threshold of peace. These events form the background of our daily life, and influence the trend of our special work. Under the stress of the war situation the scientist has had to prove himself a good citizen; and each science has taken the opportunity for showing how in her case "wisdom is justified of her children." From chemistry to psychology the various sciences have been able to demonstrate their value to the State. It might seem appropriate to do the same for psychopathology, and the task would be an easy one. In time of peace the medical profession had only occasionally been roused from its psychiatric slumbers, when some specially noisy controversy promised diversion, and the laity was seldom aware of psychopathology save when it seemed to touch the province of public morals. The serious military problem of the war-neuroses made internist, surgeon and laymen alike take cognizance of problems in their military garb, which in their peace garb they had been wont to ignore. War-neuroses and peace-neuroses are essentially the same; the front in the one case is represented by trenches, in the other by the home and the market-place.

The conscience of the internist and surgeon and layman—and in relation to the problems of psychopathology the internist and surgeon have virtually been laymen—touched to the issues of the neuroses in soldiers, must not be allowed to lapse back into ante-bellum apathy. A serious responsibility rests on psychopathologists to use the present golden opportunity, and to see that the body of knowledge acquired by them is firmly woven into the general fabric of medical science, and does not remain in a state of splendid but unproductive isolation. If progress along these lines is to be made

¹Presidential address delivered before the Psychopathological Association, at Atlantic City, June 18th, 1919

there will be required a spirit of toleration, an attitude of cooperation, a sanity of judgment and a moderation of statement, which have sometimes been lacking in the past. In this paper I propose to discuss very briefly the responsibility of the psychopathologist in relation to matters, with which personally I have recently been somewhat occupied.

The thorough analysis of the maladjustments of adult life has led to increasingly intensive study of the life of the child, of his native equipment, of the complex factors involved in the atmosphere of the home, the school and the playground, of the sensitizing results of various experiences, of the complexity of the instinctive organization and the interplay between the instincts and the other forces which go to make up the total personality. Investigations along these lines have yielded a rich harvest, valuable not only to the psychopathologist, but to whoever is concerned with educational theory and practice or interested in cultural progress in general. Where the issues are so far-reaching, it is most desirable that what is valuable in the new doctrines should not be so mixed with doubtful material nor so diluted by extravagant hypotheses as to be rejected by those best equipped to assimilate and to apply them.

The psychopathologist, who is interested not only in detailed research, but in the utilization of the information thus acquired in forwarding the progress of mental hygiene in the community, realizes that in isolation he can do little.

He sees the necessity of invoking the cooperation of teachers and others who are practically concerned in child welfare, and of making them sensitive to factors in childhood, which clinical experience has shown to be of great importance; in this task he is much hampered by the inadequacy of the available books on child psychology, which are of so little help to whoever has to deal with the real child and his difficulties. He, therefore, welcomes any book which may help these workers to gain an insight into the subtle problems of childhood.

The author of any scientific work has the absolute right to present his individual views in the form most acceptable to himself; he is responsible only to his own conscience for the form and matter of the presentation.

The psychopathologist interested in mental hygiene, however, feels that the author of such a book has a great responsibility. He can not help judging such a book in relation to the effect which it will produce on those cooperating in educational work, as well as on its intrinsic merits; a strong individual colouring, perhaps a source of

literary charm, may in this case deprive the book of much of its value and make it a somewhat doubtful contribution.

It is with mixed feelings that one finds published an English translation of Dr. H. Von Hug-Hellmuth's *A study of the Mental Life of the Child*. It is to the author's credit that she is neither too proud to enter the nursery, nor too dainty to follow the child into the toilet, and that she honestly puts down the results, no matter what the conventional value of the topic. The book is full of fine observations, it shows sympathetic insight into important aspects of the child's life which are usually passed over in silence; but at the same time it introduces, as of equal value, statements of the most hypothetical nature and so startling that the worker, not trained to separate the wheat from the chaff, will be tempted to lay down the work in despair. The judicious must grieve at the author's facility of hypothesis. In the very first pages the author shows that she is not content with mere observation but that the reactions of the new-born infant are to be subjected to ingenious interpretations, no control of the validity of which is possible. We find the infant with no "trailing clouds of glory" but bursting forth into the world in frenetic pursuit of pleasure, which is almost always assumed to have some erotic significance. I shall not stop to discuss this prevalent assumption that the pursuit of pleasure is necessarily the determining factor of all human activity; we may leave such a discussion to ethics, where eighteenth century utilitarianism has furnished a lively topic of debate.

A few examples may be given of the author's method. She emphasizes the fact that the mode of reaction of the child is liable to be determined by prenatal experiences: the pleasure which one child claimed (perhaps in momentary defiance) that he derived from the smell of the fingers, which he had been sucking, is tentatively referred to "memories of odours associated with the intra-uterine state"; the warmth of a tepid bath "may awaken in the infant a dim memory of his life before birth." "Possibly the deepest root of the infantile fondness for quiet corners is to be sought in phantasies pertaining to the prenatal state in the uterus" (p. 83). With memories reaching into the prenatal period, and reactions as complicated as those of the adult psychoneurotic, the child's mind is presented to us not as something in course of evolution, but rather as a wonderful miniature of the adult mind. The following references may illustrate the author's interpretations borrowed from the analysis of adults. With the little child playing at keeping house, the scouring and polishing "do not

spring solely from a desire, on her part, for activity, but they must be recognized as a beginning of the repression of *forbidden* desires, of those longings which live themselves out, in their primitive form, in the game of 'Doctor' " (p. 67).

For doubtful observation and exuberance of hypothesis the following may be cited: "The habit of measuring things in play is more pronounced upon the whole with boys than with girls in early youth, and it is natural and probable that its deepest and most strongly repressed and secret root lies in the interest in their own sex-organs from the size standpoint, and in the comparison of them with those of other boys" (p. 88). Another gratuitous hypothesis: "The act of casting something at an object, aiming at something, could be considered as a symbol of erection."

A child of 18 months cried when his sister cried; to the author this is too tender an age to be credited with altruistic feeling, but not too young for the explanation that the crying is partly due to "the unconscious overcompensation of the sense of hostility through exaggerated demonstration of affection." Here the miniature psyche of the child anticipates the adult hypocrisy of the drawing room.

A final quotation may be given to show how recent formulae, derived from the study of adult maladjustments, are applied without qualification to another sphere: "Indeed it is not going too far to search for the basis of everything that goes wrong with a child in his own sexual life, or that of the persons with whom he has to do."

The serpent enters Paradise at an early age; that we may admit, but let us give the Devil his due, and not utilize the serpent as a scapegoat.

If Von Hug-Hellmuth, in order to throw light on the dark places of the child's mind is tempted to give us glimpses of the intra-uterine psyche, Ferenczi² anxious to illuminate the general problem of man's adaptation to the universe, utilizes to the full his intuitive knowledge of intra-uterine or prenatal psychology. No more ardent advocate of the intra-uterine state could be found than Ferenczi: "If the child in the mother's womb has a psychic life, unconscious though it be—it must receive from its existence the impression that it is omnipotent. For what is omnipotence? The sensation or feeling that one has everything that one wishes, and that there is nothing left to be desired." One may cavil at this definition of omnipotence but the Nir-

²Entwicklungsstufen des Wirklichkeitssinnes. S. Ferenczi. Intern. Ztschr. f. Aertz. Psychoan. Ht. I, S. 124.

vana of the intra-uterine state is apparently very desirable, if lack of desire be desirable; birth is more or less a disaster and instead of fear being the dominating emotion of the nascent individual, as Freud suggests, it would be more natural to assume that the attitude is one of blind despair. The first cry of the child after manipulating the various stages of descent in the orthodox obstetrical fashion may be correctly interpreted as:

..... facilis descensus Averno

Sed revocare gradum.....

Hoc opus, hic labor est.

The new-born longs to return to its paradise, and the nursing personnel intuitively recognizing this wish, no doubt owing to the vibration of their own subconsciousness, try in the conventional way to procure the child the illusion of its earlier habitat. In a lyrical strain Ferenczi describes how the child is either sheltered by the nurse from unnecessary stimuli or is rocked and sung lullabies, to reproduce that obscure external and internal vibration which perplexed the child as he swung to and fro within the uterus.

Ferenczi attempts not only to feel himself into the psyche of the new born, but also to think himself into it, and it is through just such anthropomorphic thinking oneself into the immature and developing psyche of the child that Von Hug-Hellmuth has produced the weakest parts of her books. With such an anthropomorphic standpoint all the familiar biological reactions receive new interpretations; thus, for Ferenczi, the first sleep is not to be considered like the sleep of the puppy or the kitten, it is nothing else than the successful reproduction of the intrauterine situation, which gives the greatest protection from external stimuli. All later sleep is a periodic regression to this condition, "to the stage of magic-hallucinatory omnipotence." If a biological reaction like sleep can receive this anthropomorphic interpretation there is no reason why it should not be extended to pathological reactions like the epileptic attack. Dr. Pierce Clark has endorsed this point of view and maintains that the unconscious strivings of the epileptic are more intense than simply the desire to be caressed by the mother, they represent the desire to be in the mother, the physical union of the intrauterine life is sought, the Nirvana of prenatal existence, perfect Allmacht (*à la mode de Ferenczi*).

To some a critical attitude towards such formulations may appear to indicate "resistances," and the mere accusation is as fatal as elsewhere that of being bourgeois. We are, however, at a stage where

such polemical methods may be discarded in the interest of the progressive elaboration of well-grounded psychopathological doctrine, its incorporation into medical science and its utilization for the public welfare.

Some may have too many "resistances," some too few; some may fret against the delay due to the toilsome sifting of data of little emotional appeal, and may indulge in imaginative constructions of shadowy outline and vague formulation, while others may be too little responsive to what is suggestive in these products of intuition and imagination, and remain somewhat fettered by their insistence on particulars and their demand for scientific proof.

What is sometimes forgotten is the wider audience, both medical and lay, and the social problems which form the wider setting of those strictly medical. If we remain sensitive to these wider issues we shall cultivate a sobriety of thought and presentation, involving to some uncomfortable self-restraint, but which holds out a promise of much wider usefulness. The neglect of these considerations may delay the recognition by medicine of the place due to psychopathology; inspired by them the psychopathologist will have the better claim to be good physician and good citizen.

CYCLOTHYMIC FUGUES

FUGUES ASSOCIATED WITH MANIC-DEPRESSIVE PSYCHOSIS: A CASE REPORT

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COMPLETE schisms in the realm of personal identity are classically found in hysteria. Their occurrence in Epilepsy, Alcoholism, Schizophrenia (dementia praecox), and individuals without manifest psychosis has been described. Certainly there is not, however, any abundance of literature on the event of such episodes in the course of the Cyclothymoses.

Such a case is here detailed. It is that of a man with a frankly cyclothymic constitution. The first act of the drama was a psychotic episode which was probably a manic phase; it was succeeded by two fugues, practically intercurrent, in which he disappeared entirely for over 2 years. The history of his travels and life during these fugues was completely lost until the onset of a typical manic state shortly after his return to normal existence. During the psychosis, after a preliminary phase of excitement, hyperkinesis, etc., he became grandiloquently expansive, identified himself with God, and related in detail all the events of the fugue out of which he had recently emerged. This was followed by a hypomanic state which shortly terminated and he was discharged. For a time he was quasinormal mentally, and recollected his narration of events of his fugue, but had again forgotten completely the events themselves, much to his bewilderment. Soon he began again to experience *Dammerzustände*; he would "find" himself in nearby towns, evidently as the result of a brief fugue. He asked for voluntary commitment and after a month was again discharged. Then followed a period of mild "manic-depressive, depressed," in which he was, however, able to continue his work. This gradually disappeared and he was at the time of submitting this manuscript, approaching a normal state.

In short, then, here is a man who was cyclothymic, and in whose case there succeeded Mania, Fugue No. 1, brief interim; Fugue No. 2, Normal interim. Mania, Recollection of events of Fugue No. 2, Hypomania, Normal interim. Fugues No. 3 (several brief), Normal interim, Depression, Normal interim (?).

Whatever the final outcome of the case, and whatever its essential significance, the striking and unusual relationship of the identity splitting and the cyclothymic tendency and psychosis is certainly of the utmost interest.

The case follows in detail: D. B. is a man of 30, whose family history is in all particulars negative. It will be added here for all time that his physical condition was entirely normal; the blood, spinal fluid, and urine quite negative.

At about the age of 18 he joined the U. S. N. There is no history of any abnormal mental tendencies whatever until after the age of 25. He married happily 7 years ago; wife has had 2 children and no miscarriages. Although he had had only a grammar and commercial school education, he was a wide and capacious reader, so that combined with his travel experiences, he became virtually a well educated man, and this fact appears from a study of his career as well as from his written productions. Prior to the events in the succeeding history, there would appear to have been a certain tendency toward the constitutional quasi-hypomaniac state: he investigated and reported in great detail certain "conditions" at a certain Radio station, where he was put in charge; he instituted personally numerous needed repairs; he sent "lengthy telegrams at my own personal expense" (his own description) in regard to the work; he (later) "immediately organized a class in splicing, since not more than 1 in 30 . . . has been instructed in the art of making an eye splice or a back splice, nor in the use of a palm and needle."

The first evidence of psychosis, however, appeared as follows: In May, 1913, he was ordered to duty on the western coast, first to California, then to Alaska. It was here that he found, as he claims, that the radio station was in poor condition, and instituted the investigation and made the report above mentioned. Shortly afterwards he received a copy of an inspector's report giving him the blame for the conditions instead of the credit for reporting them; and he was subsequently relieved of that post. From this time "I was not myself. . . ." No proof of this is appended, however, except that his memory for the succeeding events is "hazy" and the facts are tak-

en in part from his wife's memory. Subsequently various misfortunes overtook him; their stateroom was robbed; he was unable to find an abode for his pregnant wife; he was transferred to a new station where there were no accommodations. These mishaps finally repaired, trouble with the enlisted force began, and unpleasantness between the wives of the petty-officers, etc. The climax came in the birth of a second child without medical attendance, the physician being kept away by a storm. (The station was an insular post.) This was in January, 1915.

A month later he was again transferred. "From that day on I cannot swear to anything, for I know nothing (with one exception . . . a sort of struggle with a sergeant named Bennett or Barnett, who was confined with me in a cage on board the transport T.). The cage referred to is the one used for transportation of what some people are pleased to call lunatics. On the balance of the trip I have not the slightest recollection, nor did I know until my return to Boston on April 24, 1917. . . ." (This was, then, a period of 26 months.)

The subsequent history is as follows: He was transferred to the Phillipines for duty there; had some trouble again with other service men, and was retransferred to a hospital. The details of his illness he learned long afterwards from an associate whom he happened to meet, who told him that he had gone to the officer's cabin indignant and "enraged" over interference with what he regarded his duty, and with the officer's behavior, and threatened to kill him.

He was then sent back to the United States on the transport T. (which fact he recalls vaguely) arriving in California on December 5, 1916. It seems then that the authorities gave him "the choice of a medical discharge or 3 months leave," putting the question to his wife by mail. He telegraphed her for the money to come home, and was given a furlough "on or about January 16, 1916." "The ticket agent (later) informed Mrs. B. that I had appeared at the office of his agent in response to his advice that upon demand I would be furnished with a ticket and funds to take me through to Boston, that I had made inquiries as to train schedules, etc., and finding that I had some hours to spend, had told him that I would be back later, that I had several purchases to make and I did not care to take the chance of losing the ticket and money (which Mrs. B. had telegraphed him). I never again appeared. . . .

"What I did or what happened to me from the time I am report-

ed to have made inquiries at the ticket office up until about the 25th or 26th of February, 1917, I cannot say. I am not a drinking man; in fact have been rather proud of my total abstinence." (This and numerous other excerpts quoted above appear in a petition presented by him to the Naval authorities.) Search by detectives and officials was fruitless and he was given up as dead.

What actually occurred was later brought out in detail and will be given as it was learned. Passing over this period to April, 1917, a period of 16 months, we are informed that he "found" himself on board a small coastwise steamer working his way back to the United States from South America. . . . "My memory seems to come and go, but one thing was in my mind, getting back to Boston, getting in touch with my wife and family, getting all the details I possibly could and then find out exactly what my status was. I arrived in Boston April 24, 1917." He found his wife, the home was re-established, he reported to the Naval authorities, and after some preliminaries he was restored to duty "on a year's probation." From his own account his services were efficient and able; through his efforts certain bootlegging was detected and routed, and he was given charge over some 303 men; was complimented by various higher officers, and finally promoted to charge of the radio school of the U. S. S. W—. Later he was sent to San Domingo. There was some friction here, however, for reasons not entirely clear, and he was retransferred and eventually discharged as incapable of handling men.

His naval record here ceases, although he was greatly disturbed by the turn of events, and spent great pains in trying to be reinstated, an attempt which was unsuccessful. I have at hand a copy of a letter to the Bureau of Navigation which he composed, giving his version of the affair, which is some 18 pages of single spaced typewritten matter, perhaps 10,000 words.

At this time his wife thinks he showed considerable change in disposition; he was quite irritable and "grouchy," flaring up easily, but never unkind to her or to the children. He took his discharge very seriously indeed, and grieved much over it. Without difficulty, he secured a position in the ship building plants, earning \$30.00 a week, and took great pleasure in reestablishing his home life. After a few months, however, he secured employment in an investment company, with the promise of even better wages. This company is reputed to be one of high business standards and ideals. He became at once intensely interested in the work.

On the first day of the new work he complained of feeling "the same dripping in my throat that I felt before." On the third evening he came home distinctly hypomanic; he talked volubly and excitedly; brought the children some candy, kissed them and his wife, and went on talking of the money they were to have, and the idealism of the company for which he worked. He talked more and more volubly and boisterously; he began to touch on rather distantly related topics; he could not at first be persuaded to go to bed. When this was finally achieved, he would only sit in the bed and talk and shout. Finally he jumped up and rushed into the street in his underwear. There, he jerked off even this garment and stood stark naked in the street until apprehended by the police who brought him to the Psychopathic Hospital in the patrol at 2 A. M. July 27, 1918.

The picture presented by him here at that time is pretty well summarized in the Ward Admission Note: (quoted with a few additions)—"A euphoric, excited, husky Jew who talks earnestly and in a loud tone on the subjects of his delusions. He is 'the Master Mind,' says that his mind is God, that he dominates the thought of the universe, that he wrote the Bible, that he has 100 million dollars, and that it is in his head, etc., etc. He is grandiose and expansive, deluded, but not hallucinated, correctly oriented in all spheres, not irrelevant or incoherent, gesticulates but is not stereotypic, shows elation, flight of ideas, and hyperkinesis over a wide range."

This, in general, was the picture seen, and was sufficient to justify a diagnosis of Manic Depressive, Manic phase. As the excitement died down, he showed more tangible evidences of the manic state . . . was constantly on the *qui vive*, wished to be doing something, played the piano, served the trays, helped with the ward work, always with a bustle and an efficient speed. Before discharge he became much less noisy and more amenable to orders, although he was at all times fairly obedient.

He showed at one time, however, a very curious state which is of great interest here. The general attitude of this phase is well shown by the following note: "Very much disturbed, and talking constantly. Says he is "all in" today, following the lumbar puncture, and that in fact Dave is dead, and that it is the Creator speaking. What a damn fool the examiner is that he can't see that it is the Creator speaking. How indeed can Dave (who is dead) tell the Creator to stop swearing?"

It was during this identification of himself with God that the

events of his previous twilight-state were learned. He refused at such time to respond to his name, but answered freely to some such approach as this: "Good morning, Creator. Will you tell me how D. B. is today?" (To which he would respond, perhaps, "The Creator finds that Dave is better today . . . feeling pretty chirp"). By extending this interrogation to the events of his past life, the whole previously forgotten period was elucidated.

Thus it began that "The Creator is aware that D. B. remembers he went to get his ticket to come right back to Boston, but he never went to claim it. Something went wrong in his head and he went down to Orville, California. (It will be recalled that for none of these events had he any memory prior to the psychotic episode.) Here he signed a contract with Dreggian Company of London, and they gave him \$300.00 for traveling expenses. But he had to go 129 miles north to get this money. He got it from Mr. Hammond in the Fisk building in San Francisco . . . there was 3 of them, Dave and 2 more. Their names were Mr. Stevenson and Mr. Mellier. . . ."

This narrative continues, always in the third person, and sometimes necessarily spurred on by pertinent interrogations. It runs that he went by a devious course to Columbia, South America, and by train to Barranquilla. This and many other foreign names, as well as innumerable minor details were related without hesitation by him throughout the story. They were up the Nechi river to a place called Zaragossa (and so on . . .). He worked in various mines. At one time he developed some sort of lesion on his leg. For this he went to Medellin, Columbia to consult medical opinion, and saw Dr. Gil, "pronounced like Hill."

(Here I want to quote from the document written by the patient prior to the present psychotic episode, and excerpted above). "In all the dark period I remember only one or two events, viz: . . . lying in a bed with my hands secured under me . . . and a strangling feeling in my throat. Someone beside me was holding something over my face so that I could not see, and speaking to me in Spanish and I felt myself gradually losing the strength to struggle, while a sort of rattley sound seemed to be bothering my head and it seemed to me that someone was endeavoring to cut my right leg. It could have been but a short time afterwards that I began to regain consciousness, at least so it seems to me, and my mind seemed to be kind of cobwebby, still not so much that I failed to realize what was

going on and that I was in a strange place, entirely unknown to me so far as I know, and that something had happened to me.

"I soon began to realize that the two gentlemen in the room with me were doctors and that they had just completed an operation to remove a growth of some kind, an abscess, I believe, from under the large muscle on the inside of the right leg, well below the groin.

"During the intervening days while convalescing, I learned from these doctors that visited me alternately, that I had been operated upon for the removal of this growth under the muscle of the right leg, which seemed to have been caused by a heavy blow of some kind or other. They had used a gas dentists sometimes use in order to avoid giving me pain. The anesthetic used, I believe, is called "Sonoform" and is put up in small brownish glass tubes, which are placed in the inhalator and are then shattered by a blow of the hand to release the gas. Two tubes of this gas were shattered, but my recollection dates back only till the time of the breaking of the second tube.

"Further guarded inquiries elicited the information that I was in Columbia, South America, that I was known by the name of D. S. G. and wherever I went I had introduced myself as that party, using an American passport with my photograph and full description attached as a means of identification. This passport is still in my possession. Again my memory fails to serve me."*

Thus it appears that for this brief episode he retained memory after the *Dämmerzustand* had entirely cleared, but it is also apparent that it is the only period of the long South American sojourn which was recollected prior to the psychotic episode (No. 2) which we are now describing.

The story related during the psychotic period continues:

"Dr. Gil operated on Dave's leg; he used Sonoform or something like that . . . it is a dentist's anesthetic you know. Dave recovered all right and started back across country once more, riding a mule. About this time Dave recovered consciousness and came to himself (sic). It was only momentarily and then went back again as before. He knew he was D. B. and he could speak English but he didn't know how he got there. It was kind of hazy in Dave's mind, he don't know how it was."

"He rode across country on this mule 450 miles and finally

*At another time he told his wife that he recollected finding himself riding a mule across country, wearing a heavy beard.

got back to the junction. At this point he took a canoe and went up the river to the old place where he had originally been employed. . . . They wouldn't give him his job back. Dave was very much hurt. But he picked up and went clear back to the coast, working his way. He came to himself down the coast, one day. The way he came to himself was this: He heard them talking about the war; it seemed that . . . America had entered the war, and Dave recalled that he was a sailor. Then he learned that they were going to take the sailors back that had deserted. He did not entirely come to himself, however—Dave never came to himself until he got to Philadelphia. He went back to the United States and landed at Philadelphia on the 22nd of April, 1917. He went by train to New York and stayed at a hotel in New York which the Creator can't remember right now, but will in a little while. Dave came to himself down at that New York hotel and he remembered that he had a wife and he took the train to Boston right off." (The rest of the story corresponds precisely with what is known to be actuality, and has been previously related).

This story was given chiefly at one sitting, but details were added by request at other times, and there was no essential deviation from the original story.

After the usual period of ten days he was committed to T———State Hospital. One month later he was discharged on visit from that institution, and was apparently immediately reinstated in his work with the bonding company. He called to see me 5 days later, somewhat exhilarated, voluble, and showing considerable pressure of activity. He claimed to remember all the events of his stay here and stated that while he realized his conduct had seemed abnormal he had done this for a particular reason, namely to gain admission to a hospital for the study of mental disease and have his mental constitution certified to therein, and his sanity established, so that he might have this guaranty to show his friends and business acquaintances. "A man said that either my company had a mighty good thing or else we were a pack of nuts, and I came here to demonstrate that I wasn't."

Suffice is to say that this clouding of insight and the various obvious symptoms of hypomania were sufficient to convince the examiner that he was yet somewhat psychotic.

A month thereafter, however, he called again, this time apparently quite clear. His wife was interviewed in the meantime and she agreed that he seemed in all ways his former self. His work

with the company had continued to be satisfactory and he was making a comfortable living on commissions.

At this interview he started by saying he wished to retract what he said at the previous interview, that he had thought it over and come to a different conclusion. "I realize now that . . . I had no real control over myself . . . absolutely none. I didn't want to do it, but I couldn't help myself. I seemed like two individualities." (sic!)

He then corroborated the incidence of the events immediately prior to his recent psychosis. He gave without any deviation whatever such details as his family history, his naval record, etc.

"I could hear myself talking to you, and see you plainly but for all that I was able to do, I couldn't help myself. Yes, I thought I was the Creator, and lots of other things. I was a gorilla; I thought you gave me leprosy with that lumbar puncture needle. It seemed that as Creator I was going into the bowels of the ocean and bringing up from the wreckage of the Titanic those people who had gone down with it. A peculiar thing about it is that I recall having tried to defend the Immaculate Conception, although as a Jew I have never confessed belief in it and in fact prefer not to discuss it. I also had some sort of feeling against priests . . . that they were all bad, and all turned into haddock and put into the sea. But some of my best friends are Catholics . . . religion makes no difference to me, nor colors nor creeds, nor nationalities."

The most striking feature of his mental state, however, was a very curious reestablishment of the amnesia for the fugue about which he had revealed so much while acutely manic. He was considerably puzzled about it himself. "It's funny, now . . . I remember all that I told you about myself in South America while I was here, and I suppose it was true because it fits in with the few things I do know . . . but it is all news to me. I don't recall much more now than I did before I was sick, but I do remember telling you all about it then."

When closely interrogated he did not remember quite all that he had told me, and did, moreover, recall some few details which he had not told me, and which he had not previously known. For instance, "Didn't I tell you that the officers went via New York instead of via New Orleans, as I went? And did I tell you that I came back on a banana boat?"

Even at this interview there was a certain suggestion of expansiveness, but no definite evidences of mental aberrancy.

A few months later he came in one morning quite anxious and perturbed. He related that a week previously he had one noon found himself in a neighboring city, without any recollection of coming or any explanation of his presence. He returned home and said nothing of the matter to his wife, but tried to go on with his work. He found it quite difficult if not impossible to accomplish anything, however. A week later . . . the day before the visit, he found himself in Newport, R. I. without any recollection or explanation. He felt a vague consciousness that something was not right, the tightness and "dripping" in his throat was noticeable again, and he came in for advice. He was advised to return at once to T—— State Hospital, which he did.

He remained there a month, and was again discharged. Thereafter he was followed in the out-patient-department of the Psychopathic Hospital. He had had no more fugues at the time of submitting this manuscript (June 1, 1919), four months since his second discharge from the State Hospital.

He has, however, passed through a period of depression, which is almost surely a mild form of the depressed phase of cyclothymic (manic-depressive) psychosis. Perhaps the term hypomelancholia, analagous to hypomania, should be utilized. He has continued at work successfully, and his home life is imminently satisfactory. The depression is gradually disappearing.

SHELLEY AS MYTH-MAKER

BY EUGENE C. TAYLOR

I

THE adaptability of Freudian psychology, originally developed from a study of neurotic patients, to the interpretation and elucidation of works of genius has been amply demonstrated. The doctrines of wish suppression and transference seem to have removed accounts of the nature of genius, as well as of the origin of human consciousness, from the province of spontaneous generation by attempting to trace the manifestations of libido through their protean changes. As yet, however, the special field of literary criticism has profited only indirectly from psychoanalysis when the psychologists have had recourse to literature to illustrate the various points in their arguments. By this means principally, the similarity of the psychic processes producing dreams, day-phantasies, and certain types of inspirational poetry has been pointed out.¹ In the composition of metaphor and simile especially, where the poet abandons hackneyed comparisons and uses the first image that comes to his mind, the associative faculty has free play. The mechanics of association, for some time familiar to psychologists, are understood to give a clue to the patient's true self by indicating unconscious or repressed predilections and aversions.

An application of the general principles of psychoanalysis in a study of Shelley's poetry not only produces further interesting illustrations of the mechanism of the unconscious but throws illumination, as well, on the works of a poet about whom no two critics have ever agreed. In his "Psychology of the Unconscious," Dr. Jung has expanded the Oedipus-complex hypothesis to such dimensions that he is able to use it as a formula in the interpretation of religious myths, folklore, art, and literature as records in the evolution of thought. Those who are familiar with this remarkable work, and with Shelley's poetry as well, can not but be struck with the almost literal exactness with which this poet's psychic growth followed the evolution of the human mind in general, as it is outlined by Dr. Jung. Conventional modes of criticism have failed to give adequate accounts of the nature

of Shelley's genius for the same reason that anthropologists have failed heretofore to give to ancient religious myths any more than an antiquarian interest; both have been approached as unique manifestations of the will instead of the visible concomitants of a universal and unconscious struggle.

Shelley's poetry produces in those who have a natural feeling for the symbolism of mythology, and a background of experience approximating the poet's, an actual and exhilarating religious experience in which the enthusiast identifies himself with Shelley, the hero. But to those whose repressions have found releases of a different nature, Shelley's poetry will ever seem as empty, remote, and ridiculous as an outworn creed, beautiful, perhaps, in form, but etherial and possessing no contact with reality.

It is of primary importance to understand the function which the composition of poetry played in Shelley's mental economy. Shelley had an unusual amount of vitality and nervous energy which, during his youth, struggled for expression by direct action. Before he wrote "Alastor," his first poem of any importance, he had crowded into the twenty-three years of his existence as much experience as would fill the life of an ordinary person. He attempted to aid insurrections, wrote pamphlets, promoted sea-wall projects, and entered restlessly into anything that seemed to promise improvement for the general welfare of humanity. Though these actions do not show him to have been acquainted with the mechanism of social and political affairs and the power of the mind to resist knowledge, they indicate that he was, in his inexperienced way, working for definite and very actual ends. His letters dealing with business affairs are direct and clear to a degree scarce attained even by the students in the courses in commercial correspondence given by our best universities. He seems to have had a worldly sagacity, if not experience, that well might make those of his critics who call him a pure and disembodied spirit stop to consider, did they not choose to ignore it. But unfortunately, all of Shelley's benevolent attempts to establish reason, and justice, and love on earth met with repulsion and disaster. His university expelled him, his father tried to discipline him, secret service men hounded him, his friends played him false, and to the general disillusion was added the miserable collapse of his married life with Harriet.

Soon after this series of misfortunes, "Alastor" was written, and it begins, as one biographer puts it, "that series of ideal portraits which are in the main incarnations of Shelley's own aspiring and mel-

ancholy spirit." The time of its appearance, as well as its character, calls attention to the compensatory part which poetical composition played in the psychic life of Shelley. It was the critical moment in Shelley's life; thwarted by the exigencies of every-day existence, his libido reverted, to seek within itself, or in the subjective past, the satisfaction which reality had denied it. Unless this portion of the libido, cut off from reality, can find symbolic expression and, by that, release, dangerous repressions and complexes are formed. Though Shelley, after these early experiences, did not enter upon any elaborate schemes for reforming the world, he by no means became a neurotic or a recluse. His life was healthy and normal; he kept up active intercourse with his friends, delighted in domestic life with Mary, traveled, studied, and amused himself with small philanthropical undertakings. Though this side of his life is of no special interest to us at present, its existence must not be overlooked. Critics are too apt indiscriminately to judge poets' lives from their works. Where literary composition takes the place of religion for an author, the character of the writings produced are exactly in contrast with his every-day life. A case in which the reverse is true illustrates the point: Readers of Dr. Samuel Johnson are often surprised to find him at once a man of keen and analytic intelligence and an implicit believer in Christian dogma. But the repressed portion of Shelley's libido found no release in the channels of institutionalized religion; it was necessary for him to build his own religion from the very beginning. It is the purpose of this paper to trace the unconscious development of the religious myth which gave egress to the thwarted desires of Shelley.

Shelley's poetry falls naturally into two classes, representing the two periods of his life: The first is distinguished by the quest motif, and "Alastor" is the only notable poem in the group. The second may be termed "dramas of emancipation," and "Prometheus Unbound" is the consummate example of the type.

II

The narrative element in "Alastor" is slight. A Poet, nurtured during his youth on philosophy and stories of the mighty past, in early manhood "left his cold fire side and alienated home to seek strange truths in undiscovered lands." The Poet visits the "awful ruins of the days of old," unhindered by any of the impediments common to humanity, for his singular beauty was powerful enough to procure him

food from savage men and their lovely daughters. These always became enamored of him, though their charms never roused him from his metaphysical preoccupation. But trouble was in waiting for him, for

The spirit of sweet human love had sent
A vision to the sleep of him who spurned
Her choicest gifts.

The Poet, after wandering through Egypt, Arabia, and Persia, at last found his way to the vale of Cashmire. There one night in a cave, a vision of a "veiled maid" came to his sleep and spoke to him, and

Her voice was like the voice of his own soul
Heard in the calm of thought: its music long,
Like woven sounds of streams and breezes, held
His inmost sense suspended in its web
Of many-colored woof and shifting hues.

After she had talked and sung a while of "knowledge, and truth, and virtue, and hopes of divine liberty," her love for these abstractions precipitates itself, as it were, into the sexual passion for a very concrete embodiment of them in the form of the Poet himself.

Sudden she rose,
As if her heart impatiently endured
Its bursting burden; at the sound he turned,
And saw by the warm *light of their own life*
Her glowing limbs beneath the sinuous veil
Of woven wind, her outspread arms now bare,
Her dark locks floating in the breath of night,
Her beamy bending eyes, her parted lips
Outstretched and pale, and quivering eagerly.
His strong heart sunk and sickened with excess
Of love. He reared his shuddering limbs and quelled
His gasping breath, and spread his arms to meet
Her panting bosom:—she drew back awhile,
Then, yielding to the irresistible joy,
With frantic gesture and short breathless cry
Folded his frame in her dissolving arms.

And the philosophical chat with a beautiful lady is consummated in the typical Shelley fashion. It is interesting to note that Shelley's own love affairs generally began with discussions, and his love letters were passionate disquisitions on abstract themes.

The Poet, disquieted by this vision of a perfect female com-

panion, began a long and aimless search for such a person. He did not go, as one might expect, to the inhabited portions of the globe, but

Through Balk, and where the desolated tombs
Of Parthian kings scatter to every wind
Their wasting dust, wildly he wandered on,
Day after day, a weary waste of hours,
Bearing within his life the brooding care
That ever fed on its decaying flame.

Occasionally he is given food by the mountaineers' daughters, who, having a practical sense of his ailment,

Press his pallid hand
At parting, and watch, dim through tears, the path
Of his departure from their father's door,

while the Poet continued his rapt and ecstatic pilgrimage to nowhere, innocent, at least, of such histrionic exclamations as "Excelsior."

At last he discovers a battered shallop floating near the shore, and embarking, he is carried along by a whirlwind, "as one that in a silver vision floats," for an indefinite period of time. Finally he is borne on some winding stream far up into the Caucasus. Here the boat mysteriously deposits him in the midst of nature's wildest scenery. In a sort of landscape trance, he continues his wanderings for some two hundred and fifty lines of impassioned description, until he expires in a green recess at the artistic moment of moonset.

That the motif of restless wandering which forms the theme of this poem has its basis in sexual passion and longing can hardly be overlooked, as Shelley uses it here with cause and object clearly indicated. But before it is possible to discuss adequately the larger significance of the movement of events in this poem, it will be necessary to examine in some detail the erotic symbolism displayed in the descriptions of individuals and landscapes.

There are in dreams, it has been found, certain images of universal occurrence and others that are purely personal; these the psychoanalyst must attempt to interpret. It is the same in poetry; beside the great mass of uncatalogued but easily understood symbols which a poet uses, there are those which are peculiar to a single poet. These symbols are the result of some repressed wish or former disquieting experience struggling to relieve itself by expression. The symbols are discovered by their recurrence; if there is any constancy in the scenes with which Shelley surrounds his lovers during their moments of high

amorous emotion, or if there is any set form in describing the woman herself, it is from these similarities that we may derive the erotic symbols themselves. Then, when they are repeated in a poem that is not overtly erotic we shall be able to recognize more exactly the poet's emotion as he composed the passage in question.

Man has always found in the contemplation of nature's beauties an expression for thwarted love, a consolation for the sting of lost or departed love, or a stimulant for the ideal love-to-be. It is rarely recognized to what a degree natural scenery can be a repository for sexual passion.⁴ Mr. Thomas has remarked in this regard that, "There is much in Shelley and Spencer written since they knew a woman, which has no mention of woman, and yet is full of love and fit to awaken and satisfy love."² Another critic has said that Shelley's life was a search for green lawns among hills and forests. Satan, whom Anatole France adores as a sort of world spirit, the embodiment of all human wisdom and experience, makes the following remark, not attempting to conceal the natural symbolism of cloud, hill, and forest:

And for myself who have deeply studied the secrets of nature, seeing but now these clouds curling wantonly round the bosom of the hill, I was filled with mysterious longings that I know nothing of but that they spring from the region of my loins, and that, like the infant Hercules, they showed their strength from the very cradle. And these longings were not merely after rosy mists and floating clouds; they pictured very precisely a wench named Monna Libetta I made acquaintance with once while traveling.³

Shelley makes the following statement in his fragmentary essay "On Love":

Hence in solitude, or in that deserted state where we are surrounded by human beings, and they sympathize not with us, we love the flowers, the grass, and the waters and the sky. . . . There is eloquence in the tongueless wind, and a melody in the flowing brooks and the rustling of the reeds beside them, which by their inconceivable relation to something within the soul, awakens the spirit to a dance of breathless rapture, and brings tears of mysterious tenderness to the eyes, like the enthusiasm of patriotic success, or the voice of one beloved singing to you alone.

The surroundings in which the Poet in "Alastor" dreamed his love dream, already quoted, are significant.

The Poet, *wandering on*, through Arabie,
And Persia, and the wild Carmanian waste.
And o'er the aërial mountains which pour down
Indus and Oxus from their icy caves,
In joy and exultation held his way;

Till in the vale of Cashmere, far within
Its loneliest dell, where odorous plants entwine
Beneath the hollow rocks a natural bower,
Beside a sparkling rivulet he stretched
 His languid limbs.

Here, as is usual in Shelley's poetry, a cave-like recess in the mountains, all entwined with odorous plants and containing a rivulet or fountain, is the ideal place for the consummation of love. The cave is not a personal symbol with Shelley;⁶ it will be remembered that Virgil could find no place more fitting in which to stage the love between Dido and Aeneas. In the description of the visionary lady, little is unusual save that she is seen through a "sinuous veil of woven wind," by the light of her own life. This image Shelley uses many times and in many variations.

As the shallop in which the Poet embarks during his wanderings not only plays a large part in this poem, but as boats make a constant appearance in Shelley's verse, it will be well to speculate on the emotional significance of this image. Boats were as constantly present in his life as they are in his poetry; sailing and boating had a great fascination for him, and his emotional character was, in a great measure, developed on and near the water. The very cadences of the waves became the cadences of his verse. Some of his most perfect metrical passages are those dealing with sailing and imitating the long sweeping motion, the speeding before the wind, or the short undulations of a choppy sea. Added to this delight in motion was the ever present mystery of the boat and the wind, its pilot,—Shelley's boat was generally piloted by the wind, for he could never understand the mystery of its action, nor bring it about without dangerously gibing.

The aimless wandering, the swift motion, and all the other sensations which one can enjoy in a boat, may have a sexual basis, as the psychoanalysts say, but we do not need a scientist to tell us that these experiences in Shelley's case were associated with love or were accessory to love. Any time a boat is brought into the poems, one is safe in assuming that a woman is, in some way, concerned. It may be the Poet's search in "Alastor," the cruises at the beginning and end of "The Revolt of Islam," the invitation to Emily in "Epipsychidion," the voyage of the poetess in "The Witch of Atlas" in her magic boat, or any of the almost innumerable cases, a beautiful woman is in some way involved, and the incident is told with amorous ardor.

There is again the delight in being swept along with a smooth

and sometimes dizzy motion when the Tartar steed carries Laon and Cythna to safety and love,⁷ or when the carriage bears Helen and Lionel to a similar destination.⁸ All these modes of transit furnish, as well, the fleeing lovers a sense of security, whether it be from the storms or from the cruelties of "the million-peopled city vast."

While it is impossible to discuss minutely the mass of landscape detail which makes up the last half of "*Alastor*," a few lines are especially worthy of note as giving an indication of the emotion which inspires the whole. With a sort of "pathetic fallacy," the landscape takes on a sexual coloring in the eyes of the yearning Poet. The swan is seen as an object of envy, because he has a tangible embodiment of his love, and a home to which he is returning, as the Poet says,

Where thy sweet mate will twine her downy neck
With thine, and welcome thy return with eyes
Bright in the lustre of their own fond joy.

The oak is seen as a lover,

Expanding its immense and knotty arms,
to embrace the light beech, and the vines embrace the "wedded
boughs" as though they loved them, while the
Ivy clasped
The fissured stones with its entwining arms.

A peculiar ambiguity exists in "*Alastor*" which has caused those critics who have observed it no small amount of perplexity. A consideration of this apparent duplicity of purpose leads us at once to the heart of the subconscious conflict that was going on at this time in Shelley's mind, and thence to a true understanding of the quest writings. Shelley prefaced "*Alastor*" with remarks which show that he intended the poem as a tragedy; the Poet is supposed to have received his "apportioned curse" for avoiding human love and natural affiliations; yet the spirit of "sweet human love" sent a vision poorly calculated to turn the erring Poet from a quest of ideal and abstract beauty to contentment with ordinary earthly forms. The title itself, "*Alastor*, or *The Spirit of Solitude*," implies, by the meaning of the Greek word *alastor*, that solitude is an evil thing; yet Shelley is himself the hero of the poem. The vague quest emotions he actually experienced, and the landscape descriptions, which indicate the sincerity of the wandering motif, were written with the passion he felt in the presence of such scenery.

In the preface he says:

They who, deluded by no generous error, instigated by no sacred thirst of doubtful knowledge, duped by no illustrious superstition, loving nothing on this earth, and cherishing no hopes beyond, yet keep aloof from sympathies with their kind, rejoicing neither in human joy nor mourning with human grief; these, and such as they, have their apportioned curse. 9

It is evident that he is trying intellectually to justify the two opposing tendencies which he finds torturing him with their concealed conflict. There is first the regressive tendency, or that portion of the libido which, thwarted in life, turned to idealism (Platonism) and attempted to escape by a quest of the absolute. Opposed to this is the progressive portion of the libido which found expression in his actual conduct.¹² His practical sense correctly allying itself with the progressive libido, attempted to justify his actions and condemn his phantasies. He had married Harriet, deluded by a "generous error," and having just parted from her to live with Mary Godwin, he found that his life was far from the Sir Galahad sort of career his imagination demanded. These are the two factions at war in "Alastor" producing the noted equivocal result.

It may add to our understanding of the situation to have in mind the typical romantic misapprehension of Platonism. The romanticists imagined that they were at one with Plato in his search for the absolute. They knew the "Symposium" and held love to be the great panacea for earth's ills, but romantic love was the exact opposite of Platonic love in its operation. Platonic love approached the absolute by trying to get away from sex, hoping to be able to contemplate beauty in the abstract. It was apparently constitutionally impossible for Shelley to realize that the Greek method succeeded in its aims only through a sublimation of the sexual passion through homosexuality.⁹ Romantic love began with the theory of universal love, but eventually found an embodiment for all its ideals and an expression for all its passion for world reformation in the love of an individual woman. The one mode tends away from sex, as a thing to be avoided, towards the universal; the other moves from the abstract to an apotheosis of sex. In making virtue a passion, the romanticist made passion a virtue.

But returning to the analysis of the quest motif, we are attracted by two fragments in the same vein with "Alastor." These are "Prince Athanase," composed within the year after "Alastor," and "Una Favola," written later in Italian prose. They present two important points for this study: Both fragments are variations of the

search motif of "Alastor" and follow the same general plan and symbolism of that poem. The heroes are the same idealization of Shelley himself; a feature that he was not wholly blind to, for he says in his essay "On Love":

We are born into the world, and there is something within us which, from the instant that we live, more and more *thirsts after its likeness*. It is *probably in correspondence with this law that the infant drains milk from the bosom of its mother; this propensity develops itself with the development of our nature*.¹⁸ We dimly see within our intellectual nature a miniature at it were of our entire self, yet deprived of all that we condemn or despise; the ideal prototype of everything excellent or lovely that we are capable of conceiving as belonging to the nature of man. Not only the portrait of our external being, but an assemblage of the minutest particles of which our nature is composed; a mirror whose surface reflects only the forms of purity and brightness; *a soul within our soul* that describes a circle around its proper paradise, which pain, and sorrow, and evil dare not overleap.

The second important point to note is that these two pieces were never finished, and that for the best of reasons. Though they were to have been carried out in the same general plan of "Alastor," they were to have given expression to the retrogressive portion of the libido only. The visions of the perfect woman in both of these fragments were also to have been the spirit of earthly love and were to have sent the heroes on a similar quest. Yet in these cases earthly love was to have been an error from which the hero was to have been released only by a super-vision of abstract beauty at the moment of his death. The conflict giving rise to the quest motif was already being solved; "The Revolt of Islam" had already been written, and these two fragments, the essay "On Love," together with Platonic idealism, in its romantic misinterpretation, were abandoned forever. Shelley remarks, in a note on "Prince Athanase," "The author was pursuing a further development of the ideal character of Athanase, when it struck him that in an attempt at extreme refinement and analysis, his conceptions might be betrayed into the assuming a morbid character."

After considering these points, the true object of the quest motif should be almost self-evident; the retrogressive libido was leading back to the golden age of childhood and to the mother, but, on account of the appearance of sexual needs, it was blocked by the incest prohibition. The Oedipus-complex results.

There is a convincing amount of evidence to substantiate this view. We know that Shelley was very attached to his mother and sisters. His mother took his part when he quarreled with his father,

and he spoke of her with affection and regard while he had only contempt for his father.¹⁰ That the idea of incest had a strange fascination for him is certain. There are at least six indications of this in his poetry which may as well be mentioned at this time. In the original form of "The Revolt of Islam," the hero and heroine were brother and sister. Rosalind, in "Rosalind and Helen," was cruelly and disastrously separated from her lover when it was discovered too late that he was her brother. Incest forms the theme of "The Cenci." In "Prometheus Unbound," Earth is loved by his sister the Moon, and Prometheus himself loves the universal mother, Asia. In "Epipsychidion," Shelley regrets that the loved Emily is not his sister.¹¹ All of these expressions come later than "Alastor," and are here cited simply to show what took the place of the abandoned quest theme in the poet's mind, that we may the more clearly realize the true object of the quest.

As for the quest theme itself, it is a recognized indication of the existence of the Oedipus-complex. It has appeared in numerous forms from the beginning of recorded time. The holy grail legends are manifestations of it.¹² The heroes of German romances devoted their lives to the quest of the blue rose, an object equally unattainable.¹³ The legends of Ahasuerus, the Wandering Jew, are parallel cases.¹⁴ Shelley had an interest in the Wandering Jew, too, and there is a poem by that name probably composed wholly or in part by him. All of these legends point in one direction, as Dr. Jung says:

The wandering is a representation of longing, of the ever-restless desire, which nowhere finds its object, for, unknown to itself, it seeks the lost mother. . . . But the myth of the hero, however, is, as it appears to me, the myth of our own suffering unconscious, which has an unquenchable longing for all the deepest sources of our being; for the body of the mother, and through it for communion with infinite life in the countless forms of existence.¹⁵

It must be remembered that Shelley's quest poems were psychologically unsuccessful. "Alastor" alone was completed and only because of its superimposed "moral" element. In each of these pieces the hero, detached from reality, fails in his search for the mother and consequently ends in death. But the libido is not in search of death but life, renewed, eternal, and abundant life which is reached only through the mother and rebirth, according to the universal mythological formula. The incest barrier must be evaded. In his dramas of emancipation, we shall see how Shelley does this.

III

One is tempted to exclaim after reading the 4860 lines of "The Revolt of Islam" for the first time, "Can this have been written by the man who objected to Christianity because it was 'contrary to reason!'" The poem is a product of phantasy-making, as anyone will agree who has attempted to find in the story it tells, any sense of reality or logical sequence of events. Shelley, in his efforts to be universal in his expression, detached himself more and more from specific incidents and definite characters. This type of composition reached its perfection in "Prometheus Unbound," which is, in fact, an algebric formula for human salvation, the ideal archetype of all religious systems. "The Revolt of Islam" is by no means so perfect a myth as "Prometheus Unbound;" it shows by certain repetitions and crudities in the symbolism and occasional intrusions of the "logical faculty" that Shelley's mind was still in an unsettled state; he had not yet found the medium in which his unconscious could move, unhampered by contingent reality, direct to the object of its eternal desire.

There are, nevertheless, many things of importance for the present study in "The Revolt of Islam." The first form of the story only will be considered. It was originally given to the printer under the title, "Laon and Cythna," and several copies were struck off before the scandalized publisher discovered that the hero and heroine, whose love story forms the framework of the tale, were brother and sister. Shelley at last consented to make the necessary changes, and the poem appeared later with its present title.

Reviewing very briefly the main points of the narrative, we will, at the same time, examine some significant details in the symbolism. Laon tells the story. He and his sister had grown from infancy together in the tyrant-cursed land of "Argolis, beside the sounding sea," and had early entertained themselves conversing on man's injustices to man and prospects of divine freedom. But their happy idyllic life did not last. Childish love grew to sexual love, and before Laon had scarcely experienced its joys, Cythna was taken from him by the tyrant's soldiers, while Laon himself was exposed on a high tower to the hot sun and starvation for attempting to interfere.

The night before the parting, Laon dreams; he tells of it:

Methought, upon the threshold of a cave
I sat with Cythna; drooping briony, pearled
With dew from the wild streamlet's shattered wave
Hung, where we sat to taste the joys which Nature gave.

He dreams of the ecstasy of passion for a time, and then a sense of anxiety and fear enters his sleep; he feels that Cythna is in danger and needs his protection:

The scene was changed, and away, away, away!
Through the air and over the sea we sped,
And Cythna in my sheltering bosom lay,
And the winds bore me.¹⁷

This is easily recognized as a typical love dream. The symbols are already familiar to us; the cave with its inevitable streamlet is here again, and again there is the delight in being born swiftly before the wind, safe with the beloved one from pursuers.

Laon is rescued from his torture at the critical moment by an old man who gives him a mother's care¹⁹ and carries him away in a "swift boat" to a place of safety. Here he remains for seven years regaining his sanity, until he learns, at last, that a beautiful woman is leading a successful revolt against the tyrant, and, thinking that she may perhaps be Cyntha, he endures many hardships to join the revolutionists. The insurrection goes well for a time, but later fails on account of the monarch's treachery.

Having sacrificed all but their lives, Laon and Cythna, reunited, flee, at the last moment, on a black Tartar steed, to a convenient mountain top. Then ensues one of the most detailed of Shelley's love scenes, surrounded by all the necessary scenery for such an occasion.²⁰ In this case the cave is replaced by a cavernous stone ruin covered with a "verdurous woof," forming, within, a hollow dome, and somehow, through a shattered portal, a portion of the sky is visible. The winds of autumn, as though "spell bound," had driven dead leaves to form a natural couch in that recess.

While there is not space to consider many of Shelley's shorter poems, the connection of this passage with the famous "Ode to the West Wind," written two years later, should not be overlooked. It is the same wind, after all, the fructifying wind, the west wind bearing spiritual rebirth, that caresses the dead leaves into a bridal bed for Laon and Cythna, which Shelley bids lift him as a leaf from the thorns of life and bear him as a prophecy for the regeneration of mankind.²¹

Unable to manage a streamlet on a mountain top, Shelley introduces a philosophical aside which brings in this necessary image, as well as several others which have already been pointed out.

We know not where we go, or what sweet dream
May pilot us through caverns strange and fair

Of far and pathless passion, while the stream
Of life our bark doth on its whirlpools bear,
Spreading swift wings as sails to the dim air;
Nor should we seek to know, so the devotion
Of love and gentle thoughts be heard still there
Louder and louder from the outmost Ocean
Of universal life, attuning its commotion.

In the next stanza the lovers are sitting beneath the golden stars, and, as the details of their past fight for liberty fade from their thoughts, a sort of Nirvana of perfect knowledge descends upon them, like light from beyond the atmosphere clothing the "clouds in grace." As they sit thus, a most unusual thing happens; a meteor, seen through a rent in the dome-like roof, lights up, for a moment, the lovely features of Cythna. This is the prelude, as it were, of that "wide and wild oblivion of tumult and of tenderness" which follows and which is so perfectly described as to need no elucidation. But its precipitation by so unusual a natural phenomenon would suggest an investigation of Shelley's use of that image.

"Meteor-happiness" is used in "Queen Mab" to describe the heated and transitory nature of sexual passion. The word *meteor* is used twice in "Rosalind and Helen." In the first instance, Rosalind is telling of her lover, from whom she was parted when he was found to be her brother, and she quotes him as saying that he would like to have his grave on the mountain top, "where weary meteor lamps repose," and all things are eternal. Nothing could be more natural than for the lover just parted to desire a place where his love could be permanent; according to the symbolism, this would be the natural way of expressing such a wish. Without this interpretation the passage is meaningless. The second use of the word is found in the following lines:

And as the meteor's midnight flame
Startles the dreamer, sun-like truth
Flashed on his visionary youth
And filled him, not with love, but faith.

That a meteor could awaken a sleeper to anything but love seemed so unusual to Shelley that he made special note of it. And similarly in twelve other cases, in which he makes use of the word, his feeling for it as a symbol is more or less obvious; it is invariably used with other erotic symbols, in close proximity with a love passage or the description of a woman.²²

The meteor, as well as the west wind, is, in fact, a universal libido symbol, an accompaniment of the birth of the hero.²³ It will be remembered that Maya, the mother of Buddha, was impregnated by a shooting star, and that a strange star appeared on the evening of the Christian nativity.

These symbols point clearly in one direction; they indicate the significance of the action of the story: this mountain-top nuptial is the ceremony of conception of the hero on the mother spouse; the hero is reproducing himself through the mother.²⁴ The sister necessarily plays the mother role.²⁵ The cave-like ruin,²⁶ the water,²⁷ and the wind are all symbols of the mother and rebirth. The Tartar steed, appearing as the hero's intelligent mount, is a symbol for the repressed incest wish, tamed and put to good use.²⁸ The tyrant evidently plays the part of the incest barrier, for he was the cause of Cythna's being taken from Laon. But through self-sacrifice, the power of the tyrant is annulled and the hero is able to achieve his wish.

As has been said, the poem is somewhat unsatisfactory as a coherent myth. The necessities of the story,—slight enough to be sure,—place some restrictions on the ending in particular. Laon and Cythna are finally captured by the tyrant and put to death, but this does not end the tale. A magic boat bears them, for the traditional three days, with their minds "full of love and wisdom," among scenes well suited to love, and finally lands them at the "Temple of the Spirit" where they are to enjoy eternal life and happiness.

IV

"Epipsychidion" continues, somewhat more literally than does "The Revolt of Islam," the subject of the quest poems, and celebrates the discovery of "youth's vision," the "sister soul" with whom the wanderer expects to find perfect and lasting peace. Psychologically, the poem accomplishes little; the struggle to liberate the libido is only temporarily successful. This is because oestral love is glorified directly, in the typical romantic fashion. Shelley was still experimenting and had not finally realized that love, like life, must be lost in order to be won, that it must be sacrificed and spiritualized before it can escape from the toils of the incest bond and proceed, renewed and eternal, from the source of all life,—the mother.

In "Epipsychidion," there is much of the symbolism of rebirth, yet the necessary self-sacrifice is lacking, and Emily, after all, is not a

mother surrogate. Shelley wishes she were his sister, and the wish appears again unconsciously when the "lone dwelling," intended for the poet and Emily, is found to have been built "ere crime had been invented, in the world's young prime" by some "tender Ocean King" for "his sister and his spouse."

Shelley first reviews the emotional experiences of his life and attempts to justify himself by stating his philosophy of love. He then dreams of his perfect union with Emily, the latest embodiment of "youth's vision." The vision begins with the line, "Emily a ship is floating on the harbor now," and exhibits the characteristics of a Shelley love dream: the ship, sailing like a bird, the wind, the mountain's brow, the trackless wandering, and the snugness away from the storm. Then the

Isle under Ionian skies,
Beautiful as a wreck of Paradise,

is described with all the images used in other love scenes. There are the caverns, the undulating tides, thick forests, pine woods, lakes, and fountains.

When they are alone on this "island in the purple east," the lovers will retire to "some cavern hoar," where they can talk, "until thought's melody become too sweet for utterance." As we have noticed, the cave is usually ornamented with a spring or streamlet, and in one case a meteor was seen through an opening in the roof at the moment of consummation. In this case there is no fountain nor meteor, but there is still better indication of the significance of these symbols. The lovers begin by talking philosophy, as usual, but soon words will no longer express the great something ("Intellectual Beauty") which the poet feels to pervade the universe; then words die,

to live again in looks, which dart
With thrilling tone into the voiceless heart,
Harmonizing silence without a sound.
Our breath shall intermix, our bosoms bound,
And our veins beat together; and our lips,
With other eloquence than words, eclipse
The soul that burns between them; and the *wells*
Which boil under our being's inmost cells,
The *fountains* of our deepest life, shall be
Confused in passion's golden purity,
As *mountain springs* under the morning Sun,
We shall become the same, we shall be one
Spirit within two frames, oh! wherefore two?

One passion in twin-hearts, which grows and grew,
 Till like two *meteors* of expanding flame
 Those spheres instinct with it become the same,
 Touch, mingle, are transfigured; ever still
Burning, yet ever inconsumable.

And again in the last lines of the poem, he calls his soul a meteor piercing love's universe with a flight of fire. "Epipsychidion" is of value in this study, principally because of this clarification of an interesting symbol, and also, of course, on account of its failure to afford a satisfactory release for the libido.

V

"Prometheus Unbound" dramatizes the struggle of the libido to free itself, to attain that perfect state where it can find expression, where the wish exactly corresponds with the act. Dr. Jung, by "directed thinking," conceives of such a condition. Shelley, following freely the indications of his own unconscious, pictures imaginatively and poetically a desired millennium in which the libido finds no obstacles in its path. The method of Dr. Jung is perhaps practicable, as it has its basis in reality; the formula of Shelley is imaginative, and, as it unintentionally follows in detail the processes common to all religions, offers only compensatory satisfaction by means of symbollic expression. Shelley possessed in a remarkable degree that elemental religious enthusiasm which creates the hero myth as a means of escape from the oppressions which actual life places on the spirit. As Dr. Jung says:

It is as if the poet still possessed a dim idea or capacity to feel and reactivate those imperishable phantoms of long-past worlds of thought in the words of our present-day speech and in the images which crowd themselves into his phantasy. Hauptmann also says: 'Poetic rendering is that which allows the echo of the primitive word to resound through the form.'¹⁹

The Promethean myth offered Shelley an excellent foundation for his stupendous drama of redemption. Prometheus is in many ways the perfect type of religious hero; he suffers vicariously for mankind to propitiate a hostile god. He appealed particularly to Shelley, because he opposed the tyrannical diety not with cajolery or with defiance but with patient and loving obstinacy. Satan, Shelley admired and pitied for his indefatigable spirit and the wrongs done him, but Prometheus surpasses Satan as a hero, for

Prometheus is, as it were, the type of the highest perfection of moral and intellectual nature impelled by the purest and truest motives to the best and noblest ends.⁴⁰

The psychological significance of the main features of the myth, as Shelley uses it, is absolutely clear. Prometheus is the further development of Laon, the hero with whom the poet identifies himself. The first act of the drama reveals Prometheus, bound to a precipice among the icy rocks of the Indian Caucasus, suffering Jupiter's torture in order to redeem mankind from the divine tyranny. These details of his suffering are common to many mythologies; Laon, we noted, was bound in a similar manner and on a similar account. This brings us at once to the very point of the story: Jupiter, "Monarch of Gods and Daemons," the abstract symbol of all oppression, is simply a repetition of the tyrant in "The Revolt of Islam," and plays a similar psychological role. He is the incest barrier, the sum of all obstacles that block the libido in its circuitous course, first away from and then back to the mother and eternal happiness.²⁹

Shelley's Prometheus does not suffer the crude physical tortures of the old Grecian god; Jove's vultures have invented a more subtle agony. Prometheus says, in apostrophizing Jupiter,

Heaven's wingèd hound, polluting from thy lips
His beak in poison not his own, tears up
My heart; and shapeless sights come wandering by,
The ghastly people of the realm of dream,
Mocking me.³⁰

And thus, unexpectedly, Shelley hit intuitively upon the cause of dreams: Jupiter, the incest barrier befouls the natural wish, preventing its expression; dreams are the result.

Prometheus, in the early days of his torture, had hated and cursed Jupiter, but does so no longer, as he says, "I hate no more, as then ere misery made me wise."³¹ It is the death of hate in Prometheus which gives the first indication of Jupiter's fall. Through self-sacrifice, the hero has successfully sublimated his desires; the incest barrier is no longer a terror; and hence is no longer hated. Disregarded it must necessarily cease to exist.

But, for dramatic reasons, Prometheus would hear the forgotten curse he had once launched against Jupiter. He calls upon the spirits of the mountains, the springs, and the whirlwinds to repeat the curse, but they are able to tell only of their own sympathetic sufferings when the curse was uttered. One spirit says that

A pilot asleep on the howling sea
 Leaped up from the deck in agony,
 And heard, and cried, "Ah, woe is me!"
 And died as mad as the wild waves be.³²

A certain critic, lacking Shelley's intuitive insight into the situation, thinks that this sailor should have rejoiced to hear "Heaven's fell King" thus roundly cursed and condemned to eventual oblivion. The pilot's action appears natural, however, when we know the nature of the subconscious struggle to which Prometheus' imprecations gave vent. The pilot, hearing the oaths, assumed, for a moment, the intolerable oppression the hero was enduring, and, being less gigantic, perished of madness, as one should expect.

Prometheus objects because the nature spirits will not repeat to him, who made his agony the barrier of their else all-conquering foe,³³ the words he wishes to hear. Here enters into the drama for the first time the note of infantile memory, or rather an idealized memory in the form of a wish. Prometheus speaks:

Oh rock-embosomed lawns, and snow-fed streams,
 Now see athwart frore vapours, deep below,
 Thro' whose o'ershadowing woods I wandered once
 With Asia, drinking life from her loved eyes;
 Why scorns the spirit, which informs ye, now
 To commune with me?³⁴

Conventional exegesis interprets Prometheus as Man and Asia as Nature, and the present unhappy state of society is supposed to be due to their separation,—a theory sufficiently vague to have been applied successfully to all the conflicting tendencies of romanticism. The "return to nature" may mean anything from eating raw meat to reading the classics. But if Asia is understood to be Mother Nature, the explanation comes fairly close to the facts, for Asia is, in reality, the second mother, the mother-spouse, the "Daughter of Ocean," and, hence, the sister or mother surrogate toward whom the hero is striving. The Earth, with whom Prometheus next speaks, plays the role of the first, or physical mother, from whom Prometheus becomes more and more detached as his spiritualization advances. The Earth herself dares not repeat Prometheus' curse, for the obvious reason that it was directed against Jove, the incest barrier.

Earth has two tongues, the language of life and the language of death. The significance of this has been a puzzle to commentators. Earth dares not "speak like life" to Prometheus, for that is the lan-

guage which Jupiter knows. When she attempts to speak to him in the language of the dead, Prometheus exclaims:

Obscurely thro' my brain, like shadows dim,
Sweep awful thoughts, rapid and thick. I feel
Faint, like one mingled in entwining love;
Yet 'tis not pleasure.

And Earth answers:

No, thou canst not hear:
Thou art immortal, and this tongue is known
Only to those who die.

It would seem that the voice of life, which Jupiter censors, thus hindering the mother speaking as her true self (or rather hindering Prometheus having the mother speak as he would have her), is nothing more than conscious speech and thought. It must be remembered, of course, that the dialogue and the characters in the drama are purely subjective; Earth, Asia, and the rest, speak not as themselves but as the spirit of Prometheus which vitalizes them; each one plays his part in the mind of Prometheus; each expresses only the attitude which Prometheus has toward him. The speech of the dead which produces in Prometheus' mind confused sensations only, and which Jupiter does not hear, must be, then, the symbolic speaking of the unconscious. Earth's enigmatic reply is, consequently, the expression of the hero's desire; Prometheus wishes to be really immortal and realizes that to be so he must first understand the language of the dead; that is, he must release the suppressed tongue or wish, which is accomplished by becoming as one of the dead that he may be born again.

Though Mother Earth is unable to repeat the curse for Prometheus, she tells him that there are two worlds of life and death, as well as two tongues.

One that which thou beholdest; but the other
Is underneath the grave, where do inhabit
The shadows of all forms that think and live
Till death unite them and they part no more;
Dreams and the light imaginings of men,
And all that faith creates or love desires,
Terrible, strange, sublime, and beauteous shapes.³⁵

This is as accurate a description of the subconscious as one could wish for. From this realm of the unconscious, where nothing is forgotten,

Prometheus summons, naturally enough, the Phantasm of Jupiter to repeat the curse hurled originally against Jupiter himself. The words are uttered, and, coming from such a source, Jupiter has no power to censor them. But Prometheus now regrets the curse, and the Earth interprets his forgiveness as defeat, thus indicating the further separation of Prometheus from the original mother in the progress of his spiritualization.

Prometheus is then tortured by the Furies who present to him a panorama of the human tragedy of the birth of intelligence, the almost helpless struggle of the libido to free itself from the entanglements which retard it.

Dost thou boast the clear knowledge thou waken'dst for man?
Then was kindled within him a thirst which outran
Those perishing waters; a thirst of fierce fever,
Hope, love, doubt, desire, which consume him for ever.³⁶

Yet Prometheus, undismayed, pities those who do not smart under Jupiter's oppressions, who have not gained consciousness of those oppressions, and consequently are not "saved."

The Furies depart, and Earth speaks:

I felt thy torture, son, with such mixed joy
As pain and virtue give. To cheer thy state
I bid ascend those subtle and fair spirits,
Whose homes are the dim caves of human thought,
And who inhabit as the birds the wind,
Its world-surrounding aether: they behold
Beyond the twilight realm, as in a glass,
The future: may they speak comfort to thee!

These spirits are wishes who point toward the future, prophesying the day when Prometheus is to be victorious over Jupiter; and love, now hampered and destructive, shall be free and creative. The act draws to a close when Prometheus, convinced that salvation is achieved by love alone, imagines a new Asia, modeled on his past visions. He thinks of her in true mother symbols.

How fair these air-born shapes! And yet I feel
Most vain all hope but love; and thou art far,
Asia! who, when my being overflowed,
Wert like a golden chalice to bright wine
Which else had sunk into the thirsty dust.³⁸

At the beginning of the second act we are transported from the

desolate scene of Prometheus' suffering to a vale in the Indian Caucasus made lovely by the power of Asia's "transforming presence" alone. Asia's sisters, Panthea and Ione, have free access to Prometheus, it seems, and can bear tidings and words of consolation between the parted lovers. Asia is, in fact, exiled by Jupiter, the tyrant of Prometheus' own making, simply because she is unconsciously reserved for the ultimate and transcendent love which is to recreate the earth.

Disregarding the scene divisions, the significant incidents of the act are these: Asia, who is discovered alone, awaiting Panthea and news from Prometheus, expresses, directly and by the familiar symbolism of her landscape descriptions, the desire and longing that Prometheus has for her. Panthea appears, somewhat belated, pleading as excuse, two dreams. She repeats dreams which she and Ione had had of love with the rejuvenated Prometheus. These dreams, no doubt, indicate the feeling which Prometheus had for Panthea and Ione, who were simply temporary substitutes for Asia. It is in this sense that Panthea is the messenger between the lovers. She and Ione play, perhaps, the part which Shelley's own wives played in actual life; they were less perfect embodiments of the ideal woman-to-be.

But Panthea (or rather Prometheus) had had another dream, for the moment forgotten, which now appears in audible form as the *follow* theme. This dream, assisted by Echoes, voices the exquisite follow lyrics which lead Asia and Panthea to the realm of Demogorgon.

O, follow, follow,
As our voice recedeth
Thro' the caverns hollow,
Where the forest spreadeth.

etc.

In the world unknown
Sleeps a voice unspoken;
By thy step alone
Can its rest be broken;
Child of Ocean!

These are a revival of the wandering motif. This time, however, the unconscious of Prometheus, clarified by the proper suffering, is leading unerringly toward a solution of the dilemma.

The Voices lead Asia and Panthea to a "pinnacle of Rock among Mountains," where Panthea exclaims:

Hither the sound has borne us—to the realm
Of Demogorgon, and the empty portal,
Like a volcano's meteor-breathing chasm,

Whence the oracular vapour is hurled up
 Which lonely men drink wandering in their youth,
 And call truth, virtue, love, genius, or joy,
 That maddening wine of life, whose dregs they drain
 To deep intoxication; and uplift
 Like Maenads who cry loud, Evoe! Evoe!
 The voice that is contagion to the world.

This indicates quite clearly the nature of the character, Demogorgon, who has been mentioned before in the drama⁴¹ as inhabiting that realm we called the "subconscious," "beneath the grave," from which place Prometheus summoned the Phantasm of Jupiter. Demogorgon is none other than a personification of the repressed portion of the libido. The *follow* impulse is simply the struggle of Prometheus to bring Asia in contact with Demogorgon, the unfulfilled past, the rankling memory.⁴² It will be noticed that Panthea's description of the mechanism of the repressed libido is correct; it is the origin of all religious expression; it is a bursting reservoir of restrained energy.

Spirits again lead them:

To the deep, to the deep,
 Down, down!
 Through the shade of sleep,
 Through the cloudy strife
 Of Death and of Life;
 Through the veil and the bar
 Of things which seem and are
 Even to the steps of the remotest throne,
 Down, down!

The similarity of this scene to Faust's descent to the Mothers, admirably interpreted by Dr. Jung,⁴⁴ is patent.⁴³ The descent motif is common to all mythologies; it is evinced in the many stories of the descent of the sun god into the lower regions, preliminary to rebirth and the dawn of a new day; and by Christ's three day's descent into hell. In this case, however, Prometheus does not go into hades himself, but his unconscious sends Asia there to receive the confirmation of motherhood.

Asia and Panthea are next seen in the cave of Demogorgon, in the depths. The deep valley and the cave will be recognized as mother symbols and Demogorgon as the repressed incest wish that inhabits them. Asia puts several general questions to Demogorgon and finally wins the oracular reply which marks the turning point in the drama.

If the abysm
 Could vomit forth its secrets. . . . But a voice
 Is wanting, the deep truth is imageless;
 For what would it avail to bid thee gaze
 On the revolving world? What to bid speak
 Fate, Time, Occasion, Chance, and Change? To these
*All things are subject but eternal love.*⁴⁵

The apotheosis of love is complete: Asia, Prometheus' forward-striving libido, has established communication with the pent-up, incestuous, and retrogressive libido which is immediately drained into the new, progressive form. Asia is now the perfect mother surrogate, and, like the mythical heroes who return from the dark cavern with the treasure of swelling life,⁴⁶ she ascends, transfigured as the eternal mother.

A chariot, driven by the Spirit of the Hour of Prometheus' release, appears, and the Spirit addresses Asia:

My coursers are fed with the lightning
 They drink of the whirlwind's stream
 And when the red morning is bright'ning
 They bathe in the fresh sunbeam.
 They have strength for their swiftness I deem,
 Then ascend with me, Daughter of Ocean.

One recalls at once the Tartar steed in "The Revolt of Islam" and the lines of Faust, quoted by Dr. Jung:

A fiery chariot borne on boyant pinions,
 Sweeps near me now.

It is the proper vehicle in which to ascend to a cloud above the mountains, where Asia's transfiguration is to be completed. Panthea beholds the change in Asia, and voices Prometheus' desire which has now expanded until the whole universe feels it sympathetically:

Hear'st thou not sounds i' the air which speak of love
 Of all articulate beings? Feelest thou not
 The inanimate winds enamoured of thee?

A Voice in the air, representing Prometheus, then sings a love lyric which, in its fervor and symbolism, surpasses all others in beauty:

Child of Light! thy limbs are burning
 Thro' the vest which seems to hide them;
 As the radiant lines of morning
 Thro' the clouds ere they divide them;
 And this atmosphere divinest
 Shrouds thee wheresoe'er thou shinest.

etc.

We noted a similar image, it will be remembered, in the description of the veiled maid in "Alastor." Asia answers with the lyric, "My soul is an enchanted boat," the last stanza of which shows that Shelley had a true feeling for the symbolism of sacrifice, death, and rebirth.

We have past Age's icy caves,
 And Manhood's dark and tossing waves,
 And youth's smooth ocean, smiling to betray:
 Beyond the glassy gulphs we flee
 Of shadow peopled Infancy,
 Through Death and Birth, to a diviner day.

The opening of the third act reveals Jupiter on the throne. His period is short, however, for the car of the hour arrives, carrying Demogorgon who descends and pronounces Jupiter's doom. Jupiter falls, for when the subconscious has been revealed and the retrogressive libido given progressive expression, the incest barrier must necessarily cease to exist. But as he falls, Jupiter shouts to Demogorgon, "We two will sink on the wide waves of ruin." And, as a matter of fact, Demogorgon appears no more in the drama, except in a sort of curtain-call at the end of the jubilee of the last act, to bow and tell how it was all done, but even here his character is entirely altered. The prophetic Demogorgon is gone with Jupiter, for there is no repressed libido in the perfect state,—only a conscious movement toward the object of desire.

Prometheus is released and immediately says:

Asia, thou light of life,
 Shadow of Beauty unbeheld: and ye,
 Fair sister nymphs, who made long years of pain
 Sweet to remember, thro' your love and care:
 Henceforth we will not part. *There is a cave*
All overgrown with trailing odorous plants,
Which curtain out the day with leaves and flowers,
And paved with veined emerald, and a fountain
Leaps in the midst with an awakening sound.

This is the cue for the universe to be seized with a gigantic love trance, known as the millennium. The remainder of the play is a paean of exaltation over the freedom of love, a rhapsody of liberation. Earth, no longer Mother Earth but a young male spirit, in love with his sister the Moon, strikes the dominant theme:

The joy, the triumph, the delight, the madness!
 The boundless, overflowing bursting gladness,
 The vaporous exultation not to be confined!
 Ha! Ha! the animation of delight
 Which wraps me, like an atmosphere of light,
 And bears me as a cloud is borne by its own wind.

NOTES

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33. *Ibid.*, I:118.
34. *Ibid.*, I:120.
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THE SOURCE AND AIM OF HUMAN PROGRESS

(A STUDY IN SOCIAL PSYCHOLOGY AND SOCIAL PATHOLOGY)

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ABOUT twenty-five years ago I published in my *Psychology of Suggestion* a series of experiments on Normal and Abnormal Suggestibility, carried on at various laboratories including my own laboratory. I developed the psycho-physiological theory of the subconscious, traced the causation and nature of subconscious activities, and worked out the laws of normal and abnormal suggestibility. The following pertains to our present subject:

The nervous centers of man's nervous system, if classified as to function, may be divided into inferior and superior. The inferior centers are characterized by reflex and automatic activities. A stimulus excites the peripheral nerve-endings of some sense-organ. At once a nerve-current is set up in the afferent nerves. The current in its turn stimulates a plexus of central ganglia, the nerve energy of which is set free, and is propagated along the efferent nerves towards muscles and glands,—secretions, muscular contractions and relaxations are the result; biologically regarded, various reactions and adjustments follow.

Ingoing and outgoing nerve currents with their various end-reactions may be modified by the nerve centers. Nerve currents may be intensified, decreased in energy, or even entirely inhibited by central ganglia or by their mutual interaction and interferences. Sherrington and other physiologists have by a number of experiments formulated some of the important principles of such physiological activities. The law of inhibition or interference early formulated by Ziehen may suffice: "If an excitation of a definite intensity (m) take place in one cortical element (b), and another excitation of a different intensity (n) take place at the same time in another cortical element (c) which is connected by a path of conduction with element (b), the two intensities of excitation may modify each other."

Although such modifications frequently occur, it nevertheless remains true that the inferior nerve-centers are of a reflex nature.

No sooner is the nerve-energy of a lower center set free than at once it tends to discharge itself into action. Thus every sensation, perception, feeling, emotion, thought, or belief, if left uncontrolled, tends to be translated into some appropriate movement, action, or reaction. The physiological process of setting free the nerve energy in a central ganglion, or in a system of central ganglia, is accompanied by activity in the simpler, but more organized, more integrated nerve centers, and by the lower psychic functions of simple sentience, sensibility; and in the more complex, but less integrated, less organized centers, by the higher psychic functions of consciousness, such as sensations, precepts, images, ideas, and emotions.

Turning now to the superior or the highest nerve-centers, we find that they are characterized by the highest mental functions, thought and reasoning, choice and will. A number of impressions, sensations and precepts reach those thought and will-centers; then a critical, a sifting, a selecting, a controlling or inhibitory process begins. Some of the mental states are modified and are permitted to develop within certain limits, others are given full play, while still others, and possibly the majority of them, are rejected and inhibited, not taking effect in reactions and adjustments to the environment.

The inhibited states belong to the great number of possible states with their reactions out of which selection is made by the critical thought and will-centers. These mental states, images, ideas, and feelings with their end-reactions, out of which selection is made, Galton aptly terms "the antechamber of consciousness." They are on the margin of consciousness, and are partly of a conscious and partly of a subconscious character. To quote from Galton: "Although the brain is able to do fair work fluently in an automatic way, and though it will of its own accord, strike out sudden and happy ideas, it is questionable if it is capable of working thoroughly and profoundly without past or present effort. The character of this effort seems to me chiefly to lie in bringing the contents of the antechamber more nearly within the ken of consciousness, which then takes comprehensive note of all its contents, and compels the logical faculty to test them *seriatim* before selecting the fittest for a summons to the presence of the chamber. The thronging of the antechamber is, I am convinced, beyond my control."

Mental activity in its rational or integrative aspects whether logical, moral, or aesthetic, is essentially selective in character. The logical process draws definite conclusions from given premises; the

moral man or the ethical thinker regards definite relations in behavior in response to definite relations in the environment as right or wrong; while the artist or the one who enjoys artistic work appreciates definite relations and combinations as the artistic and the beautiful. Even in ordinary life where the process of selection is not so rigid as in the arts, sciences, and philosophy, still the process of attention for the maintenance of rationality is a severe judge in the rejection of unfit streams of thoughts and ideas that may present themselves in the antechamber of consciousness, as Galton terms the state of the mind. In a train of ideas, few ideas of the total mass that offer themselves are accepted, or utilized by the guiding, controlling consciousness to be acted upon in the life adjustments of the organism. This holds true not only of the material needs, but more especially of the spiritual interests of man. The higher the level of mental activity, the more definite, the more precise, the more rigid the selective process becomes. The stream of consciousness, as it rushes along, selects, synthetizes or, physiologically speaking, integrates those trains of ideas which help most effectually to reach the destination, or, in other words, are especially fit for the purpose in hand.

This selective will-activity of the highest nerve-systems, given in the will-effort of selection, forms the very nucleus of man's rational life.

These superior selective "choice and will centers," localized by Ferrier, Wundt, Bianchi and others, in the frontal lobes, and by others in the upper layers of the cortex, on account of their selective and inhibitory functions, may be characterized as selective and inhibitory centers *par excellence*.

Man's nerve organization may thus be classified into two main systems: I. the inferior, including the reflex, the instinctive, the automatic centres; and II. the superior, the controlling, selective, and inhibitory brain-centres of the cortex. Parallel to the double systems of nerve-centres, we also have a double mental activity, or double-consciousness as it is sometimes called, the inferior, the organic, the instinctive, the automatic, the reflex consciousness, or briefly termed the *sub-consciousness*; and the superior, the choosing, the willing, the critical, the *will-consciousness*. This controlling will-consciousness may also be characterized as the guardian-consciousness of the species and of the individual.

From an evolutionary, or teleological standpoint, we can well realize the biological function or importance of this guardian-consciousness. The external world bombards the living organism with

innumerable stimuli. From all sides thousands of impressions come crowding upon the senses of the individual. Each impression with its appropriate receptors has its corresponding system of reactions which, if not modified or counteracted, may end in some harmful or fatal result. It is not of advantage to the organism of a highly complex organization to respond with reactions to all impressions coming from the external environment. Hence, that organism will succeed best in the struggle for existence that possesses some selective, critical, inhibitory "choice and will" centres. The more organized and the more sensitive and delicate those centres are, the better will the organism succeed in its life existence. The guardian-consciousness wards off, as far as it is possible, the harmful blows given by the stimuli of the external environment. In man, this same guardian consciousness keeps on constructing, by a series of elimination and selection, a new environment, individual and social, which leads to an ever higher and more perfect development and realization of the inner powers of individuality and personality.

Under normal conditions man's superior and inferior centres with their corresponding upper, critical, controlling consciousness together with the inferior automatic, reflex centres and their concomitant subconscious consciousness keep on functioning in full harmony. The upper and lower consciousness form one organic unity,—one conscious, active personality. Under certain abnormal conditions, however, the two systems of nerve-centres with their corresponding mental activities may become dissociated. The superior nerve-centers with their critical, controlling consciousness may become inhibited, split off from the rest of the nervous system. The reflex, automatic, instinctive, subconscious centres with their mental functions are laid bare, thus becoming directly accessible to the stimuli of the outside world; they fall a prey to the influences of external surroundings, influences termed suggestions. The critical, controlling, guardian-consciousness, being cut off and absent, the reduced individuality lacks the rational guidance and orientation, given by the upper choice and will-centres, becomes the helpless plaything of all sorts of suggestions, sinking into the trance states of the subconscious. It is this subconscious that forms the highway of suggestions, suggestibility being its essential characteristic. The subconscious rises to the surface of consciousness, so to say, whenever there is a weakening, paralysis, or inhibition of the upper, controlling will and choice-centres, or in other words, whenever there is a disaggregation of the superior

from the inferior nerve-centers, followed by an increase of ideo-sensory, ideo-motor, sensori-secretory, reflex excitability; and ideationally, or rationally by an abnormal intensity and extensity of suggestibility. In order to bring to the fore subconscious activities with their reflex, automatic psycho-motor reactions by removal of the upper consciousness I have found requisite, in my investigations, the following conditions:

Normal Suggestibility,—Suggestibility in the Normal, Waking State:

- (1) Fixation of the Attention.
- (2) Distraction of the Attention.
- (3) Monotony.
- (4) Limitation of Voluntary Activity.
- (5) Limitation of the Field of Consciousness.
- (6) Inhibition.
- (7) Immediate Execution of the Suggestion.

Abnormal Suggestibility,—Suggestibility in Hypnotic and Trance States:

- (1) Fixation of the Attention.
- (2) Monotony.
- (3) Limitation of Voluntary Activity.
- (4) Limitation of the Field of Consciousness.
- (5) Inhibition.

The nature of abnormal suggestibility, the result of my investigations given in the same volume, is a disaggregation of consciousness, a cleavage of the mind, a cleft that may become ever deeper and wider, ending in a total disjunction of the waking, guiding, controlling guardian-consciousness from the automatic, reflex, subconscious consciousness. . . . Normal suggestibility is of like nature,—it is a cleft in the mind; only here the cleft is not so deep, not so lasting as in hypnosis or in the other subconscious trance states; the split is here but momentary; the mental cleavage, or the psycho-physiological disaggregation of the superior from the inferior centres with their concomitant psychic activities is evanescent, fleeting, often disappearing at the moment of its appearance.

In the same work the following laws of suggestibility were formulated by me:

(I) *Normal suggestibility varies as indirect suggestion and inversely as direct suggestion.*

(II) *Abnormal suggestibility varies as direct suggestion and inversely as indirect suggestion.*

A comparison of the conditions of normal and abnormal suggestibility is valuable, since it reveals the nature of suggestibility, and discloses its fundamental law. An examination of the two sets of conditions shows that in abnormal suggestibility two conditions, distraction of attention and immediate execution are absent, otherwise the conditions are the same. This sameness of conditions clearly indicates the fact that both normal and abnormal suggestibility flow from some one common source, that they are of like nature, and due to similar causes. Now a previous study led us to the conclusion that the nature of abnormal suggestibility is a disaggregation of consciousness, a slit produced in the mind, a crack that may become wider and deeper, ending in a total disjunction of the waking, guiding, controlling consciousness from the reflex consciousness. Normal suggestibility is of like nature, it is a cleft in the mind; only here the cleft is not so deep, not so lasting as it is in hypnosis, or in the state of abnormal suggestibility. The split is here but momentary, disappearing almost at the very moment of its appearance.

This fleeting, evanescent character of the split explains why suggestion in the normal state, why normal suggestibility requires immediate execution as one of its indispensable conditions. We must take the opportunity of the momentary ebb of the controlling consciousness and hastily plant our suggestion in the soil of reflex consciousness. We must watch for this favorable moment, not let it slip by, otherwise the suggestion is a failure. Furthermore, we must be careful to keep in abeyance, for the moment, the ever-active waves of the controlling consciousness. We must find for them work in some other direction; we must divert, we must distract them. That is why normal suggestibility requires the additional conditions of distraction and of immediate execution. For in the waking state the waking, controlling consciousness is always on its guard, and, when enticed away, leaves its ground only for a moment. In normal suggestibility the psychic split is but faint; the lesion, effected in the body consciousness, is superficial, transitory, fleeting. In abnormal suggestibility, on the contrary, the slit is deep and lasting,—it is a severe gash. In both cases, however, we have a removal, a dissociation of the waking from the subwaking, reflex consciousness, suggestion becoming effected only through the latter. For suggestibility is the attribute of the subwaking, reflex consciousness.

A comparison of the two laws discloses the same relation. The two laws are the reverse of each other, thus clearly indicating the presence of a controlling inhibiting conscious element in one case, and its absence in the other. In the normal state we must guard against the inhibitory, waking consciousness, and we have to make our suggestion as indirect as possible. In the abnormal state, on the contrary, no circumspection is needed; the controlling, inhibitory waking consciousness is more or less absent, the subwaking, reflex consciousness is exposed to external stimuli, and our suggestions are therefore the more effective, the more direct we make them. Suggestibility is a function of disaggregation of consciousness, a disaggregation in which the subwaking, reflex consciousness enters into direct communication with the external world. The general law of suggestibility is:

Suggestibility varies as the amount of disaggregation, and inversely as the unification of consciousness.

"The problem that interested me most was to come into close contact with the subwaking self. What is its fundamental nature? What are the main traits of its character? Since in hypnosis the subwaking self is freed from its chains, is untrammelled by the shackles of the upper, controlling self, since in hypnosis the underground self is more or less exposed to our view, it is plain that experimentation on the hypnotic self will introduce us into the secret life of the subwaking self; for as we pointed out the two are identical. I have made all kinds of experiments, bringing subjects into catalepsy, somnambulism, giving illusions, hallucinations, post-hypnotic suggestions, etc. As a result of my work one central truth stands out clear, and that is the *extraordinary plasticity of the subwaking self*.

"If you can only in some way or other succeed in separating the primary controlling consciousness from the lower one, the waking from the subwaking self, so that they should no longer keep company, you can do anything you please with the subwaking self. You can make its legs, its hands, any limb you like, perfectly rigid; you can make it eat pepper for sugar; you can make it drink water for wine; feel cold or warm; hear delightful stories in the absence of all sound; feel pain or pleasure; see oranges where there is nothing; you can make it eat them and enjoy their taste. In short, you can do with the subwaking self anything you like. The subwaking consciousness is in your power, like clay in the hands of the potter. The nature of its plasticity is revealed by its extreme suggestibility.

"I wanted to get an insight into the very nature of the subwaking self; I wished to make a personal acquaintance with it. 'What is its *personal* character?' I asked. How surprised I was when, after a close interrogation, the answer came to me that there can possibly be no personal acquaintance with it,—for *the subwaking self lacks personality.*"

Under certain conditions a cleavage may occur between the two selves, and then the subwaking self may rapidly grow, develop, and attain (apparently) the plane of self-consciousness, get crystallized into a person, and give itself a name, imaginary, or borrowed from history. (This accounts for the spiritualistic phenomena of personality, guides, controls, and communications by dead personalities, or spirits coming from another world, such as have been observed in the case of Mrs. Piper and other mediums of like type; it accounts for all the phenomena of multiple personality, simulating the dead or the living, or formed anew out of the matrix of the subconsciousness. All such personality metamorphoses can be easily developed, under favorable conditions, in any psycho-pathological laboratory). The newly crystallized personality is, as a rule, extremely unstable, ephemeral, shadowy in its outlines (spirit-like, ghost-like), tends to become amorphous, being formed again and again under the influence of favorable conditions and suggestions, rising to the surface of consciousness, then sinking into the subconsciousness, and disappearing, only to give rise to new personality metamorphoses, bursting like so many bubbles on the surface of the upper stream of consciousness.

A few quotations from my work on the subject of the subconscious may help to elucidate the main traits of the lower secondary self with its extreme suggestibility and automatic, reflex consciousness:

"The subwaking self is extremely *credulous*; it lacks all sense of the true and the rational. 'Two and two make five.' 'Yes.' Anything is accepted, if sufficiently emphasized by the hypnotizer. The suggestibility and imitativeness of the subwaking self were discussed by me at great length. What I should like to point out here is the extreme *servility* and *cowardliness* of that self. Show hesitation, and it will show fight; command authoritatively, and it will obey slavishly.

"*The subwaking self is devoid of all morality.* It will steal without the least scruple; it will poison; it will stab; it will assassinate its best friends without the least scruple. When completely cut off from the waking person, it is precluded from conscience."

This explains the many atrocities committed by the Assyrian,

Macedonian, Roman or German soldier who by a long course of military training had fallen into the degraded and wretched state of the irresponsible, slavish, sub-conscious self.

"The subwaking self dresses to fashion, gossips in company, runs riot in busniess-panics, revels in the crowd, storms in the mob, parades on the streets, drills in the camp, and prays in revival meetings. Its senses are acute, but its sense is *nil*. *Association by contiguity*, the automatic, reflex mental mechanism of the brute, is the only one it possesses.

"The subwaking self lacks all personality and individuality; it is absolutely servile. It has no moral law, no law at all. To be a law unto one-self, the chief and essential characteristic of personality, is the very trait the subwaking self so glaringly lacks.

"The subwaking self has no will; it is blown hither and thither by all sorts of incoming suggestions. It is essentially a brutal self.

"The primary self alone possesses true personality, will, and self-control. The primary self alone is a law unto itself,—a personality having the power of investigating its own nature, of discovering faults, creating ideals, striving after them, struggling for them, and by continuous efforts of will attaining to higher and higher stages of personality."

Suggestibility is a fundamental attribute of man's nature. We should, therefore, expect that man in his social capacity would manifest this general property; and such do we actually find to be the case. What is required is the bringing about of a disaggregation in the social consciousness. Such a disaggregation may either be fleeting, unstable, the type is that of normal suggestibility; or the disaggregation may become stable, the type is then that of abnormal suggestibility. The one is the suggestibility of the crowd, the latter that of the mob. In the mob direct suggestion is effective, in the crowd indirect suggestion. The clever stump orator, the politician, the preacher fixes the attention of the crowd on himself, while interesting the hearers in his "subject." The orator, the preacher, or the demagogue, the politician, distracts the attention of the crowd by his stories, frequently giving his suggestion in some indirect and striking way, winding up the long yarn by a climax, requiring immediate execution of the suggestion.

The condition of limitation of voluntary movements is of paramount importance in suggestibility in general, since it brings about a narrowing down of the field of consciousness which of all other condi-

tions is most favorable to dissociation. The condition of limitation of voluntary movements is one of the prime conditions that helps to bring about a deep, a more or less lasting dissociation in the consciousness of the crowd,—the crowd passes into the mob-state. A large gathering, on account of the cramping of voluntary movements, easily falls into a state of abnormal suggestibility. Large assemblies carry within themselves the germs of the possible mob. The crowd contains within itself all the elements and conditions favourable to a disaggregation of consciousness. What is required is that an interesting object, or that some sudden, violent impression should strongly fix the attention of the crowd, and plunge it into that state in which the waking personality is shorn of its dignity and power, and the naked, subwaking self remains alone to face the external environment.

Besides limitation of the voluntary movements and contraction of the field of consciousness, there are also present in the crowd, the matrix of the mob, the conditions of monotony and inhibition. When the preacher, the politician, the stump orator, the ringleader, the hero, gains the ear of the crowd, an ominous silence sets in, a silence frequently characterized as "awful." The crowd is in a state of overstrained expectation; with suspended breath it watches the hero or the interesting, all absorbing object. Disturbing impressions are excluded, put down, or driven away by force. All interfering influences and ideas are inhibited. The crowd is entranced, and rapidly merges into the mob-state.

The suggestion given to the entranced crowd by the "master" or hero spreads like wild fire. The suggestion reverberates from individual to individual, gathers strength, becomes overwhelming, driving the crowd into a fury of activity, into a frenzy of excitement. As the suggestions are taken up by the mob and executed, the wave of excitement rises higher and higher. Each fulfilled suggestion increases the emotion of the mob in volume and intensity. Each new attack is followed by a more violent paroxysm of furious, demoniac frenzy. The mob is like an avalanche, the more it rolls, the more menacing and dangerous it grows. The suggestion given by the hero, by the ringleader, by the master of the moment, who simply gives expression to the subconscious passions of the mob, is taken up by the crowd, and is reflected and reverberated from man to man, until every soul is dizzied, and every person is stunned. In the entranced crowd, in the mob, every one influences and is influenced in his turn; every one suggests and is suggested to; until the surging billow of excitement and mob-energy swells and rises, reaching a formidable height.

Let the crowd, the mass or the mob, be indicated by m and its energy by E , the energy of another mass m_1 be E_1 . On account of the interaction of the masses the result will be m multiplied by m_1 or mm_1 and their energies EE_1 ; the energies of masses m, m_1, m_2 , give mm_1m_2 or EE_1E_2 . If the masses are equal, the energies are respectively E, E^2, E^3 , and so on. While the masses grow by equal increments of m , the energies increase by the factor E . The masses are respectively: $m, 2m, 3m, 4m, 5m$, and so on, the corresponding energies are: E^1, E^2, E^3, E^4, E^5 . *Mob-energy rises as the powers of the mass.* We may say then that while *the masses increase in arithmetical progression, the energies of the masses increase in a geometrical progression.** In other words, *the masses grow as the logarithms of their energies.* In short, if M is the mass of the mob, then $M = \text{Log } E$.

If m is 10 and E is 10, then a mass of $2m$ gives an energy of 10^2 , a mass of $3m$ yields an energy of 10^3 , a mass of $4m$ gives an energy of 10^4 , or 10,000, a mass of $5m$ gives an energy of 10^5 or 100,000. While the mass increases in an arithmetical progression of 10, the mass energy grows in a geometrical progression of 10. Briefly stated, *the mass grows as the logarithm of mass-energy.*

A knowledge of the subconscious and of the laws of suggestibility are of vital consequence in Social Psychology in general and in Social Pathology in particular. As the great Sociologist, Tarde, points out: "To understand thoroughly the essential social fact, as I perceive it, knowledge of the infinitely subtle facts of mind is necessary,—the roots of what seems to be even the simplest and most superficial kind of Sociology strike far down into the depths of the most inward and hidden parts of Psychology and Physiology."

In surveying human life in its organized capacity, from the lowest to the highest forms of social organizations in the great wealth of their manifestations, economic, tribal, totemic, sex and family relationship, marriage, art, morals, religion, magic, beliefs, practices, rites, taboos, and other social phenomena, the student of Social Psychology cannot help being impressed with the important rôle played by the instinctive, automatic, reflex consciousness, or the subconscious with its normal and abnormal suggestibility in the protean forms and activities taken by the metamorphic and anamorphic

*This law, first formulated in "The Psychology of Suggestion," is termed by Professor Giddings in his "Sociology" as "The Law of Extent and Intensity of Social Action." Giddings phrases the Law as follows: "The Law of Extent and Intensity of Social Action is: Impulsive social action tends to extend and intensify in geometrical progression."

social spirit of aggregate humanity. If there is truth in Aristotle's dictum that man is a social or rather a gregarious animal, or in that of Tarde's and others that man is an imitative animal, there is a deeper truth in the more fundamental view, which really includes all others, that man is by nature, or by his subconscious nature, a suggestible animal.

Man's subconsciousness, with its conditions and laws of normal and abnormal suggestibility, works on a large scale in the social evolution of the human race. In the course of human development and the incessant building of new social structures with their corresponding functions we find the activities of the upper, controlling, regulating, ordering, critical consciousness, rationalizing the formative activities of the subconscious with its characteristic reflex, instinctive, automatic, suggestible consciousness. The rational progress of human societies depends on the interaction and synthesis of the upper and lower consciousness. When, however, the upper, critical consciousness is kept in abeyance, or is dissociated from the lower self, society becomes subject to all forms of social diseases, mental epidemics, mob-actions, riots, horde-attacks, blind slaughters, massacres, pogroms, revolts, mass upheavals, mass movements on a great scale, such as are manifested in migrations of tribes and nations, or in civil, national, and world-wars. The very weakening of the controlling social consciousness causes the social mind to become predisposed to overaction of the social subconsciousness with its abnormal suggestibility and consequent social, psychic diseases and mental epidemics of all sorts and description. For a clear understanding of Social Psychology and Social Pathology one should keep in mind the following laws formulated in my "*Psychology of Suggestion*":

(I) Social subconsciousness is the vehicle of suggestibility and more specially of abnormal suggestibility.

(II) Suggestibility varies as the amount of disaggregation of social consciousness and inversely as the unification or synthesis of social consciousness.

(III) Social, impulsive, reflex action is in inverse relation to the synthesis of the upper consciousness and the reflex subconscious.

(IV) While the social aggregate grows in an arithmetical progression, the emotional excitement of the aggregate grows in a geometrical progression; or the emotional energy rises as the powers of the mass, the mass varying as the logarithm of its energy.

(V) The greater the uniformity of the constituent units of the social mass, the greater the mass-energy, and the more powerful are

the effects of social suggestibility. In other words, social suggestibility is directly proportional to the uniformity of the social aggregate.

(VI) Individuality is in inverse relation to the social mass.

(VII) The conditions of normal and abnormal suggestibility, such as Fixation of the Attention, Limitation of Activity, Suppression of Variations, Monotony, Contraction of the Field of Social and Individual Consciousness, and inhibition of non-conforming ideas, ideals, and beliefs, leading to a weakening and paralysis of the critical consciousness, tend to the laying bare of the suggestible subconscious with its consequent deleterious effects. The main principles of social psychology, outlined in my "*Psychology of Suggestion*" were adopted by Prof. Ross in his "*Social Psychology*":

"In the normal state" Professor Ross writes "suggestion should be as indirect as possible in order to catch the inhibitory, waking self 'off its guard.' In the abnormal state no circumspection is needed; the controlling, inhibitory, waking consciousness is more or less dormant, the subwaking reflex consciousness is exposed, and our suggestions are more effective the more direct they are." Ross then quotes our general law of suggestibility formulated in *The Psychology of Suggestion*; "Suggestion (suggestibility) varies as the amount of disaggregation and inversely as the unification of consciousness."

"The primary self is the self with personality and will. . . . It alone embodies the results of reflection, and it alone holds life true to a personal ideal. It is the captain of the ship. . . . If now this primary self is overthrown or put to sleep, the subwaking self becomes the master of the ship. This (subconscious) self has little reason, will, or conscience. . . . It is imitative, servile, credulous, swung hither and thither by all sorts of incoming suggestions. The life it prompts cannot be stable, self consistent, integrated. It is low on the scale of personality, and a situation that commits to its hands the helm of the individual life is fraught with disaster." From this standpoint Ross discusses social suggestibility, the crowd, and the mob mind, worked out in my work on the psychology and pathology of the individual and society.

Ross further realizes the import in the domain of social psychology of the factors and conditions of normal and abnormal suggestibility as developed in my "*Psychology of Suggestion*." Thus he writes: "Sidis goes further in declaring 'If anything gives us a strong sense of our individuality, it is surely our voluntary movements. We

may say that the individual self grows and expands with the increase of variety and intensity of its voluntary activity; and conversely, the life of the individual self sinks, shrinks with the decrease of variety and intensity of voluntary movements.' Here, perhaps, is the reason why individuality is so wilted in a dense throng." . . . "A crowd self will not arise unless there is an orientation (fixation) of attention, expectancy, narrowing of the field of consciousness that excludes disturbing impressions."

"With the growing fascination of the mass for the individual, his consciousness contracts to the pin point of the immediate moment, and the volume of suggestion needed to start on its conquering career becomes less and less. He becomes automatic, in a way unconscious. The end is a tranced impressionable condition akin to hypnosis. . . . The crowd self is ephemeral. . . . The crowd is unstable. . . . The crowd self is *credulous*. . . . Rational analysis and test are out of the question. *The faculties we doubt with are asleep*. . . . The crowd self is *irrational*. . . . His (man in the crowd) actions are near to reflexes. . . . The crowd self shows *simplicity*. . . . Finally, the crowd self is *immoral*. . . ."

Similarly Professor Giddings of Columbia University refers to these laws and their corollaries in his *Sociology*: "There are three of these laws" Professor Giddings writes in his work "that may be regarded as demonstrated: "Impulsive, social action is commenced by those social elements that are least self-controlled." . . .

"The Law of Restraint of impulsive social action is: Impulsive social action varies with the habit of attaining ends by indirect, or complex means." In other words, impulsive social action varies with the attainment of ends by rational means, free from impulsive, emotional excitement, characteristic of the reflex, automatic consciousness, or subconsciousness.

"The Law of extent and intensity of social action is: Impulsive social action tends to extend and to intensify in geometrical progression." This is my Law of Logarithmic relation of social mass and its energy.

I may add another important factor in Social Psychology, a factor revealed by my researches in the pathology of the human mind.

The disaggregation of social consciousness predisposes to the arousal of one of the most fundamental of impulses and instincts,—the impulse of self-preservation with its accompanying fear-instinct. The subconscious is specially affected by self and fear suggestions,

direct and indirect, which tend to awaken and stimulate the uncontrollable, slumbering impulse of self-preservation and fear which are ever ready to awaken and burst the bonds in which they are kept in the subconscious regions by the controlling, rational, personal consciousness. Once self-preservation and fear are aroused they magnify and intensify the pathogenic state of subconscious social activities.

"Intimidation" says Tarde "plays an immense part in society under the name of 'respect.' Every one will acknowledge this, and although the part is sometimes misinterpreted, it is never in the least exaggerated. Respect is neither unmixed fear nor unmixed love, nor is it merely the combination of the two, *it is a fear which is beloved* by him who entertains it." All taboos, covering the vast field of human life, religion, magic, family, marriage relationships, articles of diet, details of modes of living, rules of behavior, involving the minutiae of life of primitive societies, savage, barbarian and civilized, all the codes of law, religious, ceremonial, legal, political, all customs and rites and beliefs which control the human race in the course of its evolution, take their origin in self and fear. According to anthropological research all human institutions with all their taboos are based on fears of perils, often of an extremely superstitious nature, perils of soul and body, fears of impending evil of the supernatural before which gregarious man quails in terror of his life. The impulse of self-preservation and the fear-instinct are at the basis of social organized life activities. The taboos, the laws, the rules of gentes, tribes, and nations, from the lowest to the highest, are upheld by a vague terror and sacred awe which society impresses on man by threats of ill-luck, fearful evil, and terrible punishments befalling sinners and transgressors of the tabooed, of the holy and the forbidden, charged with a mysterious, highly contagious, and virulently infective life-consuming energy. As the English anthropologist, Frazer, puts it: "Men are undoubtedly more influenced by what they fear than by what they love." The Bible lays special stress on the fear of God as the font of wisdom. The Biblical love is saturated with fear of the supernatural. Lack of obedience to commandments, in modern religions lack of faith, is threatened with fearful tortures and eternal damnation in hell. Throughout the course of human evolution, through the institutions of gentile savagery and barbarism to political class-civilization, social organization was taboo-intimidation based on self-preservation and fear. Organized society inspires its individual units with abject terror of the least trespass of custom, rule,

rite, and taboo. "Brute force" as the English anthropologist well puts it "lurks behind custom in the form of what Bagehot has called 'persecuting tendency.'" Society enmeshes the individual in a close and strongly woven network of taboos, customs, commandments, and traditions, all maintained by force and fear.

Fear of the outraged sense of the community inhibits even the very thought of breach of a taboo or violation of custom. The taboo is based on some subconscious fear of some unknown mystic force, or some vague apprehension of a spirit power avenging the awful transgression. The taboo is essentially the fear of the unseen, of the unknown. "A taboo is anything that one must not do lest ill-luck befall. And ill-luck is catching, like an infectious disease. Hence, if some one has committed an act that is not merely a crime, but a sin, it is every one's concern to wipe out that sin; which is usually done by wiping out the sinner. Mobbish feeling always inclines to violence." This fear of communal anger, manifested at the breaking of some taboo, and resting on social self-preservation and mystic fear of the unknown and the unseen, is at the basis of all social institutions. Self-preservation and fear are at the heart of gregarious man; the two interpenetrate every fibre of his subconscious being.

Plato with his deep insight into the nature of man and society finds fear of such vital importance that he makes *the knowledge of what to fear and what not to fear* as fundamental in the education of the citizen. Self preservation with its companion the fear instinct dwell in the subconscious depths of gregarious man, and once aroused from slumber and started on their mad career cannot be arrested, they both become uncontrollable, giving rise to social plagues, mental crazes, epidemics, and panics highly contagious and virulent in character. This was well brought out in the skillfully conducted campaigns by the various governments in appealing to the masses with their characteristic suggestible subconsciousness, stirring to the very depths the reflex consciousness of gregarious man by all sorts of direct and indirect suggestions of fear of attacks and patriotic reactions of self-defense against such attacks until the evil genii of self-preservation and fear became loose, resulting in a sweeping conflagration of a war of nations with all the horrors of diseases, mutilation, and extermination of millions of human lives; over seventeen and a half millions, according to latest accounts, having perished in this world-massacre of the human race.

Of all the mental epidemics that befall aggregate humanity and its subconscious activities the worst are the mob feelings of the mili-

taristic type. The subconscious activities are not rationalized and humanized, they are in fact more brutalized than ever, inasmuch as under the aegis of military law and under the tacit understanding that necessity knows no law, there is no pity and no mercy in war. The worst of crimes are committed for the benefit of the army and the militant nation. The individual in the army becomes used to holding human life in contempt, in fact, the greater the slaughter, the greater is his merit; and the more medals, ribbons, and honors of hero-worship are showered on him, the more he becomes, after a time, indifferent to all sorts of human suffering and loss of human life. We find this indifference in the warlike Assyrians who enjoyed the impaling and flaying alive of their prisoners, and in the case of the military Spartans in the treatment of their unfortunate Helots, more specially in the imperial warlike world-conquerors, the Romans, in their love of the brutalities of gladiatorial combats and the popular delight in the shedding of blood on the arena. Thus Lecky in describing Roman society, says: "The gladiatorial games form indeed one feature which to a modern mind is almost inconceivable in its atrocity. That not only men, but women, in an advanced period of civilization,—men and women who not only professed, but very frequently acted upon a high code of morals,—should have the carnage of men as their habitual amusement, that all this should have continued for centuries with scarcely a protest, is one of the most startling facts in moral history. It is, however, perfectly normal, while it opens fields of ethical inquiry of a very deep, though painful character." The great Roman phrase-monger and moralizer, Cicero, glorifies gladiatorial games. "When guilty men" proclaims Cicero "are compelled to fight, no better discipline against suffering and death can be presented to the eye." It is instructive for us to learn as well as to ponder on the fact that "the very men who looked down with delight, when the sand of the arena reddened with human blood, made the theatre ring with applause when Terence in his famous line '*Homo sum, Nihil humani mihi alienum puto*' proclaimed the brotherhood of man." If any protests against those edifying gladiatorial games and ancient forms of movie shows of the arena appeared at all, they came not from the intellectual and ideological classes, but from the despised Jews and from those pariahs of the ancient world, the unwarlike, peace-loving, humble, early Christians who lived by the apparently absurd rule of Christianity: 'Love your enemies, and return good for evil.' There is, however, one feeble protest on record, but it is not from imperial Rome,—it is

from the mother of human progress and humanistic civilization, from ancient Athens. "When an attempt was made to introduce the games into Athens, the philosopher Demonax appealed successfully to the better feelings of the people by exclaiming: 'You must first overthrow the altar of pity!'"

Of the many mental epidemics that occurred in the middle ages, the Crusades, on account of their duration, intensity, and extent, are of interest to the student of Social Psychology and Social Pathology.

The crusades agitated Europe for a couple of centuries with a loss of more than seven million men. Peter the Hermit and Pope Urban II were the heroes who first broke the ice, and directed the popular current to the conquest of the Holy Land. The fiery appeals of the emaciated, dwarfish hermit carried everything before them. The frenzy which had unsettled the mind of the hermit was by him communicated to his hearers who, sinking into a trance, fell easy victims to the fearful visions of a disordered mind.

Meantime Pope Urban II convoked two councils, one after another. At the second council that of Clermont, the pope addressed a multitude of thousands of people. His speech was at first listened to in solemn silence. Gradually, however, as the multitude became more and more subject to the action of the suggestion, and began to sink into the subconscious state of social trance as it is usual under such conditions, sobs broke out. "Listen to nothing" he exclaimed "but the groans of Jerusalem! . . . And remember that the Lord has said 'He that will not take up his cross and follow me is unworthy of me.' You are the soldiers of the cross; wear then on your breast or on your shoulders the blood-red sign of Him who died for the salvation of your soul!" The suggestion took effect, it was irresistible. Leaving the fields and towns, agricultural serfs and petty traders displayed intense eagerness to reach the Holy City. Marching in parades and processions with high floating banners, flags, and sacred images at the sound of drums and praying monks hysterical multitudes called for preparedness in the cause of the holiest of wars,—the war of Christ against the infidel. Nations sank in a state of social somnambulism, obsessed by hatred in the name of love, and by war in the name of peace.

The silly, crazed, maniacal subconscious, in spite of its impulsive and reflex character, often simulates the reflective self by using meaningless, pompous phrases of an idealistic nature. The chattering, irra-

tional brute of the subconscious clothes itself in the tattered garments of rationality and idealism. Few are clear-sighted enough to discern the cloven hoof from under the mantle of the active subconscious, freed from all control of the rational self. Those few who by some luck happen to escape the madness of social hypnotization are afraid to give expression to their thoughts, because they are terrorized by the inquisitorial intolerance of crazed mobs and frenzied nations. Everyone spies and is spied upon in turn; everyone denounces and is denounced in turn for disloyalty to the cause of "humanity" and treason to the sacred flag. The few are forced into silence and submission by threats of violence and torture. If anyone dares to say anything rational, or if he has the courage to set himself in opposition to the maddened current of popular opinion, he is mobbed by pious crowds and is persecuted by inquisitorial courts of justice. Such was the terrible state of the mediaeval crusade-mania. Such in fact is the state of every crusade-mania which seizes on the minds of nations in the long history of national mental epidemics. If any rational person during the crusade epidemic dared to speak a word of warning, the only answer of the hypnotized, entranced crusaders was the suggestion given by the pope: "He who will not follow Me is unworthy of Me." Such conscientious objectors, "sinners undeserving of Me," were usually wiped out by sword and fire.

If we ridicule the mediaeval crusade mania, let us compare it with what took place in our own times, in the first quarter of the twentieth century. At the outbreak of the war for the alleged defense of the Fatherland the excitement of militaristic mania in the central empires of Europe reached a formidable height. There were parades, processions, the carrying high of banners and flags, the preaching of hatred and singing of "Hass" and the patriotic national hymn—"Deutschland ueber Alles"; there were Leagues of Defense and Leagues of Security, and all sorts of societies for fighting the war to a finish and for winning the war. The plague did not spare scientists, philosophers, and theologians; such men as Wundt, Haeckel, and Harnack were affected alike with the lowliest chimney-sweeps and craziest asylum inmates,—all cursed and threatened perfidious England and the treacherous allies, all were obsessed by the fervor of national defense of the imperilled Fatherland. The patriotic crusade of the Fatherland-defense did not spare anyone; the young and the old, the learned and the ignorant, the conservatives and the radicals, the capitalists, the workmen, and the international socialists were all alike affected by

this terrible mental epidemic. If anyone happened by chance to escape the plague and give a word of warning he was promptly accused of disloyalty, interned, imprisoned, immured in a cell for years of torture. It seemed as if the insane asylums had opened wide their gates and let loose their populations to hold frenzied meetings, and parade the streets in processions of wild excitement with banner, flag, and drum for the salvation of the country. Thus a German medical eye-witness of all those militaristic orgies expressed himself in private: "The streets are now full of the unbalanced and the insane; this is their hour. . . . The war will afford a free arena for every instinct and every form of insanity."

Many of those parades and processions were at first staged and controlled by the ever present hands of the central government and the ruling classes. Then the highly virulent mental germs skillfully inoculated took a hold in the subconscious mind of European humanity; the disease developed rapidly, spread like wild fire, and raged unabated throughout the width and length of the central empires. This virulent epidemic soon spread to neighboring nations, and like its deadly associate, the influenza, reached the farthest corner of the habitable globe. In some nations there was a lull of 'neutrality,' the incubating period, followed by an ever rising temperature of popular excitement, breaking out in series of 'preparedness parades' occurring all over the country from imperial New York, the stock-yards of Chicago, the mines and vineyards of California to towns, villages, and hamlets. At first social hypnotization was staged by organizers, leaders, and hypnotizers in the form of parades and processions with banners and flags, to the sound of drums and orations, reverberated and magnified by the boom and thunder of the press. The hypnotization took effect, and the demon of the demons began to stir in the depths of the subconscious social self.

Repetition and impressive, persistent suggestion finally brought about a lodgement of the virus in almost every individual of the social aggregate. Neither the learned nor the ignorant could escape the pressure of social suggestion. The way they tumbled one after another or rather one over another as victims to the fatal influence should have been a study of the utmost interest to the student of Social Psychology. Lay, literary and scientific periodicals were full of war literature. Versifiers sang of "the blood-red glory cross of war" while soldiers and sailors made love not only in halls and on the streets, but also in all the best sellers and novelettes. All the posters, all the

pictures of every journal in the land were full of war, magazines teeming with photographs of soldiers and sailors and the valorous deeds of the heroes at the front. Who could resist the pressure of insistent war-suggestion repeated day after day and month after month? There was no let up on Sundays and holidays. The pulpit thundered war, congregations sang battle-hymns.

Then came the great "saving" mania. Everything and everybody had to be saved. Circulars were distributed about saving and the war. One went to sleep with war pictures and illustrated circulars of a militaristic character, and woke up with visions of war illustrations. Everything had to be saved. Save Belgium, save the country, save Democracy, save your food, from potato peelings to the garbage can. The suggestion was irresistible, and the weak human spirit yielded and fell into a deep social trance from which the awakening could not but be one of disillusion. Meanwhile, the war literature, experiences of all kinds of colonels and generals and correspondents grew to enormous proportions. The dust raised by all that waste product which the country could have easily 'saved' blinded the eye and choked the breath. Everybody, young and old, fell to greedily reading the latest book on the war. Everybody was full of war, from the leader in society to the waiter in the club, from the leader in the paper to the wrapper round the grocery man's soap-box. Why wonder that when the air was full of the germs that the war malady spread like wild fire?

The populace became obsessed with a fury of war insanity, with a craze of Victory-mania. Security leagues, unions, associations, clubs to promote and advance something or other of a patriotic character to help winning the war were formed all over the country. The enthusiasm of national excitement went far beyond the bounds desired by the government, such as the activities of The National Security League which denounced members of Congress for not being red-blooded Americans, or for not showing one hundred per cent. of Americanism, so that Congress in self-defense had to investigate and possibly suppress the activities of over zealous leagues. Leagues of all kinds of description grew up rapidly and luxuriantly like mushrooms after a rain. Everyone attempted to outshine his neighbor, every one had to outdo his friend in doing his bit to help win the war. Posts, poles, trees, walls, and windows were plastered and placarded with leaflets, bills, and signs for the defense of the nation and the glory of the country. Whoever happened to be sceptical, or not enthusiastic enough,

was accused of being 'pro-German' and a spy, with consequences natural to such accusations. Every one tried to out-bawl his neighbor with declarations of loyalty, often of a spurious character.

The trance became deepened, the subconscious emotions of fear, anger, and aggression became more and more intensified, fanned as they were by the hot breath of propaganda and the bellows of the press, until the mass of the nation fairly quivered with the fever heat of enthusiasm and maniacal excitement, an overwhelming mass excitement which no individual could withstand. "Make the world safe for Democracy," "He who does not stand behind Me is disloyal and unworthy of Me" were slogans impressed on the subconscious mind of the public with all the suggestive force of law, press, bema, rostrum, pulpit, and movie, all waving on high old glory, calling crusaders to the battlefield of Democracy in honor of "Courage, Cooties, and Heroes," and for the glory of "the blood-red cross of War." Secretary Lansing has well summed up the general mental state in his appeal: "Let us, as loyal citizens of the Republic, serve in this mighty crusade against Prussianism." For such a mental state can only be paralleled by the crusade mania of the Middle Ages, the crusade mania which cost Europe millions of men, killed and crippled, devastations of populations and countries, followed by the no less terrible epidemic of the Black Plague which ravaged Europe and Asia from end to end, with the destruction of half the human race.

The bestialization produced by war and militant patriotism came openly to the front with all the horrors of savagery, rapine, deportation, atrocities, and the inhuman slaughter of millions of human beings for the glory of the Fatherland and Kultur and for "the making of the world fit for Democracy." Groups of scientists vied with each other in their supply of infernal machines and chemical poisons for the wholesale slaughter of mankind. Poisons and poison-gases, more deadly than ever employed by savage man, poisons which even savages and barbarians scorned to use, were utilized triumphantly and jubilantly by Kultur and culture in their mad strife for supremacy. Man could not have fallen to a lower level of vice and depravity. The Aristotelian dictum was well justified in this strife of nations, in this ignoble world war: "A vicious man can do ten thousand times as much harm as a beast." The chivalrous motto of Alexander of Macedon "οὐ κλέπτω τὴν νίκην," was scorned by the generals of civilized nations. Atrocities of the most vicious kind were justified by the watchwords: "This is war!" "Might is Right." "Necessity knows

no law." In this world-war nations fell to the lowest level of savagery. The frenzied, suggestible, gregarious, subconscious self, freed from all rational restraints, celebrated its delirious orgies, its corybanitic bacchanalia, held its mad *salto mortale* over the grave of crucified humanity.

Our social status is a reversion to savagery of the most degenerate type, an atavistic lapse towards the paleolithic and eolithic man, only more brutal, because of the greater power for evil possessed by modern man. What Hun or Vandal ever dreamt of such colossal destruction! Over three hundred billions wasted by war and depredation, about seventeen to twenty million men lost by slaughter and disease! The fame of God's scourges, Attila, Jenghiz Khan, Batu, and Tamerlane pales and fades before the glories of modern warfare. In a few years Kultur and culture have caused more ruin to humanity than all the invasions of the yellow peril in the history of mankind.

Some future historian in describing and estimating our times will place us below the moral level of the Bushmen, the Hottentots, the Todas, and the Australian savages. He may say: "Towards the end of the nineteenth and at the beginning of the twentieth century there took place a vast accumulation of wealth, due to a rapid development of applied science and practical arts. Instead, however, of improving their condition, European nations deteriorated intellectually and morally.

"Liberal education gave way to technical training. Science served on greed. Education became mechanical and military in character. The thinker gave way to the reporter, the scientist to the mechanic, the artist to the artisan, the genius to the Philistine. Industrial and commercial interests inspired by patriotism and chauvinism became the standard of nations. An insane frenzy of militarism obsessed the minds of men.

"The state enslaved the individual. Blind obedience became a virtue. Drill and discipline trained people into automatism of the subconscious with its abnormal suggestibility and extreme sensitivity to direct and indirect suggestions, intensified by brilliant parades, hypnotizing oratory, and by all the artifices of a militant chauvinistic press. Nations were thrown into a social trance, the subconscious came to the surface, yielded to the noxious suggestions, wriggled in hysterical convulsions of nationalism, became obsessed with the fury of homicidal mania, and plunged into the abyss of the world war with all its horrors and atrocities. Nations boasting of refinement and

culture, of great achievements in philosophy and science and of general world 'Kultur' and culture broke treaties, attacked, destroyed, deported, and enslaved whole populations. Women and babes were drowned like rats in the middle of the ocean by sneaking submarines. Zeppelins and aeroplanes showered explosive missiles on defenceless people, on civilian populations. Nations gloried in such brutal acts. Every fiendish deed was greeted with an ever rising wave of patriotic enthusiasm. For such cowardly, inhuman, and diabolical acts, the craven miscreants were decorated and honored as heroes by their alleged superiors. Man could not have fallen to any lower level of vice and depravity.

"The very elements of nature were let loose for the ruin of nations. Man gloried in his fiendish, military, inventive power of depredation and destruction. Science supplied virus, venom, toxins, poison, gas, rifles, cannons, tanks, and long range guns. Hell was let loose on earth. Professors of philosophy and science carrying high the patriotic banner of Kultur and culture gloried in the system of compulsory, universal, military service, first made in Germany; they exulted in the degrading, vicious process of training by which the individual is hypnotized into submission to a brutal organization of military junkers, hallowed by the name of state and Fatherland. It was the darkest period in the history of mankind. Man was crazed with the lust of blood, frenzied with rapine and murder."

Such are the terrible consequences when in fear of attack or invasion the subconscious becomes awakened to its irrational self-defence by the impulse of self-preservation and the fear instinct. The prestige of the gregarious aggregate, the overwhelming awe and terror of the herd, mob, community, the loss of individuality in the mob and the crowd, along with the conditions favorable to a dissociation of the upper, reflective self from the suggestible, automatic, reflex subconsciousness go to form the main sources of all mental epidemics, scourges, plagues, panics, frenzies, and manias, political, religious, and military. With the increase in mass of the human aggregate the mob-energy grows like the momentum of an avalanche in its downward course. Witness the overwhelming migratory obsession of swarming multitudes of hordes of barbarians, an obsession akin to the uncontrollable, migratory instinct of birds, or of buffaloes, an obsession which has seized periodically on barbaric tribes, such as the migrations of Semites, Aryans in the early dawn of history, the *Lust-Wanderung* of Celts, Goths, Normans, and Germans, Huns, Mongols,

Tartars in the early ages of our era; the flood of Arabs, obsessed with a fervor of military, religious mania; the Crusades of mediaeval European humanity, rolling waves after waves of crusaders in a fury of religious, delusional excitement, forcing their way towards the entrancing object, the grave of the Savior in Jerusalem; the bloody religious wars of the Reformation; the political revolutions in England and France with the terrible excesses of mob-rule; the mob spirit running riot in economical crisis, financial bubbles, industrial panics, religious revivals; Napoleonic wars; the recent exaltant, social mania of empire-building and world-dominion, infected by the most virulent pestilential germs of triumphant militaristic nationalism which first seized on the imperial aggregates of Central Germanic tribes, and spread like a virulent miasma to other nations, wafting its poisonous emanations across land and oceans, culminating in the worst world-epidemic,—the so called world-war.

The central and centralized, imperial governments, guided by the big interests of the country, induced in their unfortunate subjects this last pestilential epidemic of military mania by means of a persistent course of direct and indirect suggestion in which the conditions of normal and abnormal suggestibility were specially emphasized, laying bare the social subconscious, stimulating in it the fear of invasion and attack by neighboring nations, stirring up the impulse of self-preservation, rousing the entranced, hypnotized mind of the populace to a frenzy of self-defense, while the junkers, the officers, the soldiers, the professors, the journalists of the middle-classes were entranced with beatific visions of world-dominion. Nothing stirs so much to the very depths of its soul the poor, naked, irrational subconscious as self and fear. Nothing is so suggestive, so appealing to the social subconscious as fear and self which alone have the power to set society into intense excitement of maniacal fury.

With the growth of social institutions there is an ever increasing tendency towards formation of rigid rules and regulations for almost every step, for every act in all walks of life. Man's behavior is prescribed for every occasion of life. He is commanded by direct and indirect suggestion what to say and how to say it, what to do and how to do it, what to wear and how to dress, what to eat and drink and what manners to have at the table and in company, he is prescribed what to believe and what to think in fear of social condemnation and eternal damnation. Man is brow-beaten, leashed, muzzled, masked, and lashed by boards and councils, by leagues and societies, by church

and state. Man is driven by orders and commands, rules and laws, customs and fashions. Man is crushed under the burden of statutes and terrorized by fear of taboos.

Aristotle takes it for granted that it is absurd and ludicrous to force a person to cure himself. He had no suspicion that many centuries later man will be forced into treatment by benevolent organizations, charity boards, philanthropic societies, hygienic and eugenic societies, boards of health, and municipal councils. In fear of disease and in the interest of his health man will be muzzled and masked like a vicious dog, and that without any murmur of complaint. Breathing freely will become a social offense, punished by fine and by jail in the communities of the free West. With a scanty supply of laws in Hellenic commonwealths or city states what an immense vista for an Aristotle, of that grand, complex, efficient machinery of law, turning out yearly thousands of laws and taboos for the paternalistic control and alleged welfare of the citizen! What a joy to watch our bureaucratic governments piling law on law fit for the waste basket and the scrap heap! Edicts, ordinances, regulations are issued by the thousands by states, cities, towns, boroughs, organizations, societies, associations, and leagues for all imaginary human ills. Society staggers under the burden of laws and taboos. Individuality is stifled by the endless, massive excretions of its lawgivers. Our lawgivers take special pride in the ever active manufacture of new bills and laws. Recently even the legislators begin to object to the labor involved in the work on the ever growing mass of bills, introduced into the legislature of one state alone. Thus a senator of a western state complained that in one year alone over seventeen hundred bills had to pass through the mill of his legislature. Multiply that figure by the number of states, add the municipal edicts, and the numerous laws turned out by the federal government, and one can form some faint idea of the vast burden laid on the shoulders of the individual citizen. It were well if the legislators were specially instructed by their constituencies that instead of piling bills upon bills and laws upon laws, like Pelion on Ossa, they should repeal as many as they can. At the present stage of "law-mania" the rational legislator would be far more useful if he made up his mind to devote his time and energy to the clearing of the Augean stables of law products. The overproduction of laws is one of the great evils of modern civilization.

In one of the ancient Greek republics he who wished to introduce a new law had to appear before the popular assembly with a

rope around his neck, probably as an emblem of the hangman and the criminal. We have hardly made an improvement by shifting the rope to the neck of the helpless citizen. We may possibly be forced to come round to the ancient Greek practice by putting once more the rope round the neck of the legislator,—and tighten it too. Traditions, laws, taboos, statutes, commandments, rules, regulations, ordinances, manners, and fashions, all enacted by an inordinate philanthropic zeal for the good and improvement of society and race, press heavily on individuality and originality, forcing them down into the general mire of mediocrity. The home, the school, the church, the club, business, profession, trade, and union, all insist on strict, correct conformity to standard; all demand authoritatively implicit obedience and submission to rule and regulation.

The individual is so effectively trained by the pressure of taboo, based on self and fear, that he comes to love the yoke that weighs him down to earth. Chained to his bench, like a criminal galley slave, he comes to love his gyves and manacles. The iron collar put around his neck becomes a mark of respectability, an ornament of civilization. Tarde finds that society is based on respect, (*respectability* I should say), a sort of an alloy of fear and love, fear that is loved. A respectable citizen is he who is fond of his bonds, stocks, and shekels, and comes to love his bonds, stocks and shackles of fears and taboos. In fact, he attacks and fights those who wish to free him from his social, religious, and political fetters. Some criticize justly the militaristic regime with its heavy weight of obedience and strict discipline, pressing on the individual. What is the burden of militarism compared with the endless screw of the socio-static press ceaselessly and pitilessly forcing individuality into the narrow, crooked moulds of social mediocrity and respectable commonplace?

In "*The Psychology of Suggestion*" I pointed out an important law in Social Psychology, namely, that *greatness of individuality is inversely proportional to the mass of the social aggregate*. Great genius appeared not in the empire of Assyria, Babylonia, or Persia, but in the small city-states of Greece and Judea. It is not immense modern China that gives great men, but the small states of Chinese feudalism. This Law of Mass *versus* Individuality falls in line with my work on the subconscious and its conditions of dissociation: Limitation of Voluntary Activity, Monotony, and other conditions, requisite for the weakening and final disaggregation of the primary, upper self from the lower, subconscious self leave the latter bereft of control and critical sense.

This law may be modified under conditions in which the individual is given freedom and more scope than in societies hitherto known to us. In this respect we may agree with the great French psychologist, Ribot, who in reviewing my work thinks that the law admits of exceptions. Professor Ross, however, seems to adopt the law without any qualification: "It is perhaps the dwarfing pressure of numbers" he writes "that explains why vast populous societies seem to produce small individualities, whereas little societies permit great men to arise. Compare great homogeneous aggregations, such as Egypt, China, Persia, Babylonia, India, with the diminutive communities of Judea, the Greek city-states, the Italian cities of the Middle Ages, the free towns of mediaeval Germany, the Netherlands, Scotland, and Switzerland."

However the case may be with societies under widely different conditions of development the law of mass and individuality holds true of the social facts known to us. The law is of far greater importance than the psychologist and sociologist are inclined to admit. It is certainly important to remember this law when dealing with social progress. The individual is getting dwarfed and stunted in proportion as the social aggregate is getting larger and more organized. The larger the empire the more dwindles the mind of the citizen. This is especially true of empires formed by conquest in which the individual is reduced by military discipline to the rôle of an automaton, where the automatic subconscious is alone cultivated and is in direct relation with the external world, with the commands, orders, suggestions given to him by his superiors. Such empires soon crumble, sometimes in the life time of a single generation. The empire of Alexander Macedon, the empire of Charlemagne, the empires of Djenghis Khan and Tamerlane; in modern times the empire of Napoleon, the Russian and German empires are good illustrations.

The insecurity, the instability of militaristic empires is brought out strongly in aggregates held by force for a few generations: the catastrophe of the empire. The empire falls at one blow, and is gone forever. The Assyrian, the Persian, the Carthaginian in ancient times, the Austrian, the German, the Russian empire in our own times are cases in point. The empires go to pieces, they crumble into dust. From a superficial standpoint it may be said that an empire upheld by the sword perishes by the sword. This, however, is not the full truth. A deeper insight discloses the fact that the spirit of the empire-building citizen has been dead long before the final collapse. In fact it is

this death of individuality that is the real cause of the fall of the empire.

The fall of the empire is sometimes so sudden and so complete, and the spirit of individuality before its departure is so small and dwarfed, that no spirit is left to transmit the history of the imperial achievements. When a couple of centuries after the fall of the mighty Assyrian empire Xenophon passed the ruins of the once Nineveh the great, the capital of Assyria, the terror of nations, he was unable even to find out its name. Assyria was wiped out from the memory of man as if it had never existed. If it were not for Greek accounts, what would have been left of the great Persian empire, but a few ruins and inscriptions on the rock of Behistan? If it were not for modern excavations the very name of Assyria would have been like a dream of the past, long gone and forgotten. What would have been left of the Carthaginian empire, if not for the Greek and Roman historians? Those empires passed away at one single blow, and with the sudden collapse vanished all the glory of imperial power. But long before that fall the real glory had departed,—the glory of the individual. Empires may often look grand and magnificent, but they are built with poor material,—with small men and petty minds. Military aggregates or societies, held together by the sword, are doomed to dissolution at the moment of their birth. The destruction is not due so much to luxury and effeminacy, as is usually assumed, but to the dwarfing and suppression of the spirit of the free, living individuality which alone constitutes the active nucleus of social life.

With the growth of the social aggregate, social structure and functions become varied, differentiated, and rigid; social pressure increases, while individuality and originality are ever on the decrease, sinking to a uniform level of dead mediocrity and commonplace. There is limitation of the field of consciousness, limitation of voluntary activity, monotony, routine, and inhibitions, all growing with the increase of mass, structure, and social pressure on individual units. With the progressive intensification of these conditions the personal, critical consciousness gets more and more dissociated from the impersonal, automatic, reflex subconscious, and becomes subject to all sorts of absurd suggestions. If now some brilliant object fixes the involuntary attention of the subconscious mind of the social aggregate, the mental energy of the constituent units, becoming polarized, turning in one direction, develops a momentum, uncontrollable and overwhelming in its disastrous effects,—the subconscious self becomes the

luckless hysterical actor in all the vulgar farces and horrible tragedies of historical life.

Great empires, becoming gradually bureaucratized, institutionalized, differentiated, and ossified, carry within them the germs of decay and death. The growth of nations has, until the present time, been associated with a predominance of rigid structure over living function. When such lines and forms of organic development prevail, the individual, as the cell of the body, becomes soon senescent, drifting inevitably into age, decay, and death. The great biologist and embryologist, Professor Minot, describes this downward course of organic evolution, as the Law of Genetic Restriction: "The development runs in one direction, and ends in the production of structure, which, if it is pursued to its legitimate terminus, results in degeneration and death." Societies, developing on lines of organic growth, follow the Law of Genetic Restriction. The individual unit is more and more restricted to the narrow lines of growth of differentiation and specialization in which the individual is sacrificed to society and the state, and generally to the progressive development of the social organism, as the phrase runs. Such societies, from the very nature of the course taken by their evolution, tend towards decay, death, and final dissolution. Just as the process of cytomorphosis, or cell development, in the evolution of the organism leads to an increase of cytoplasm with formation of rigid connective tissue and fibre, with a corresponding decrease of nucleoplasm, the ever living font of life and youth, the process ending in dissolution of both the cell and the organism, so the process undergone by the individual in social organic evolution by a gradual reduction of the living personality and predominance of the subconscious with its rigid Byzantine institutionalism and formalism results in destruction of individuality, corruption, and dissolution of society.

With the increase of social pressure on the individual, with the ever rising power of restriction of freedom of thought and expression, and loss of liberty of manifestation of originality and initiative due to an ever greater amount of legislation and regulation of the minutiae of individual life, true social progress diminishes, comes to a standstill, ending in decline, decay, and ruin. Society is doomed to an ignominious death as soon as the connective tissue of institutions and the ossified material of officialdom with its rank growth of unyielding red tape and formalism begin to spread, choking, and strangling the free, personal life of the individual. The ancient Assyrian, Babylon-

ian, Egyptian, Roman, Byzantine, Arabian, Chinese empires, and in modern times the sudden collapse of the French, Russian, German, and Austrian empires warn us, by example, of what happens to nations, in spite of all their external splendor and apparent manifestations of greatness, when the private individual becomes restricted in thought and act by narrow, mean specialization, mean formalism, monotony of lines of action due to a legalized mesh of fibrinous tissue in a hypertrophied, cartilagenous, ossified structure of organized, and classified, governmental officialdom. History is strewn with the ruins of empires and with the remains of once living social organisms, because in the eagerness to build massive, rigid, and stable structures, the individual units became so bound and cemented by official tissue that paralysis of personal activities ensued. The whole social structure became decayed, and was finally destroyed by less organized, but more youthful societies in which the individual units were still vital, still having free scope for the manifestation of their energies. Brilliant as were those empires, magnificent as those social structures were to the external observer, they were rotten with corruption and decay, and were doomed to perish at the hands of the less advanced, more backward, but more vigorous tribes who were still alive with the living, nuclear energies of the individual.

In his description of the degenerate Byzantine Greeks Ribot tells us that their geniuses were mediocrities and their great men commonplace personalities. It was the cultivation of independent thought and the freedom of individuality that awakened the Greek mind to its achievements in art, science, and philosophy; it was the deadening Byzantine bureaucracy with its cut and dried theological discipline that dried up the sources of Greek genius. Society is on its downward course when it is building up a Byzantine empire with large institutions, immense organizations, and big corporations, but with small minds and dwarfed individualities. It is a sure symptom of social degeneration when administration is valued above individuality and official ceremonialism above originality. When the free soul of the individual is gone, the social organism gives up the ghost, and at best remains as an embalmed corpse, a warning to men in their craving for imperialism and their efforts at empire-building at the expense of the living, thinking individual. Imperial pomp is bought with the life-blood of man. Vain is imperial glory; for it is the symptom of disease and death of the social organism, grown fat with the lives of men. Society never appears so brilliant as when the end is nigh. It is like the dead lull

before the coming storm. When the storm comes the imperial edifice collapses in a chaos of ruins.

The best and most precious treasure of humanity is the free, independent personal life of the individual. More than twenty-three centuries ago Aristotle, one of the greatest thinkers of humanity, made some important generalizations on the nature of man and society, generalizations the full significance of which have not been fully appreciated. His work was based on extensive studies of the great variety of Hellenic societies and their diversity of constitutions. It may be appropriate to quote here some of his statements:

"That form of social constitution is best in which every man is best, whoever he may be, and can act for the best, and live happily. Happiness is virtuous activity. The active life of thought (as we put it, the active life of the upper, critical consciousness) is the best for man and the citizen. Happiness is activity, and the actions of the wise and the just (not the present business ideal of specialization, vocational, technical, professional or business efficiency of the greatest amount of marketable articles and luxuries) are the realization of what is good and noble. Not that a life of action must necessarily have a relation to other men (extolled at present, such as charitable, philanthropic, political, commercial, industrial, military, social) as some persons think, but much more the thoughts and contemplation which are free, independent, and complete in themselves. To man the life according to intellect is pleasant and best,—intellect constituting the essential nature of man." In other words, under a good constitution the upper, critical, rational, controlling consciousness should be cultivated both for the happiness of the individual and the general welfare of the community. "Happiness" Aristotle tells us "is self-rule, self-government." Man should not be ruled, but self-ruled: *ἡ εὐδαιμονία τῶν ἀνθρώπων ἑαυτοῖς*. "Man should not be brought up for business or for work as an end in itself, but for leisure. . . . For it is specially disgraceful to have such a poor education as to manifest excellent qualities in times of work and stress, but in the enjoyment of leisure to be no better than a slave. For it is not in the nature of a free man (a cultured man as we would put at present) to be always seeking after the useful. Education should be with a view to the enjoyment of leisure. I must repeat once and again the first principle of all action is leisure. Both are required, but leisure is better than occupation. Society should take care of the education of the individual on right principles. In

most societies, however, good education on right principles is neglected, the people do as the Cyclops:

Each rules his race, his neighbor not his care
Heedless of others, to his own severe.

Society is not a community of living beings only (for the sake of making a living as we would say, for the sake of work and trade), society is a community of equals, aiming at the best life possible for each individual citizen. . . . Now in man reason is the end after which nature strives, so that the education of the citizen (in a good community under a good constitution) should be with a view to that end, namely, the cultivation of the mind, more especially of reason."

Thus Psychology, Sociology, and History go to confirm the principle that in a well ordered and progressive community the end, the telos, is the culture of the individual, a culture based on the cultivation of the rational mind, or the cultivation of the upper, controlling, critical, personal consciousness of the individual citizen; the welfare of the community being not imperial grandeur of war and trade, empire-building of the military Macedonian type, but entirely and solely the development of man and the happiness of each individual citizen. The true aim of progress is not a beautifully organized bureaucracy with well organized departments for all walks of life in some great capital, adorned by pomp and display, or by ostentation of wealth and luxuries, but the simple, happy life of a highly cultured citizen. Protagoras' dictum: πάντων μέτρον ἄνθρωπος Aristotle modifies into: πάντων μέτρον ἄνθρωπος ἀγαθός. It is not *man*, as Protagoras claims, but the *good man* who is the measure of everything. It is not the citizen as a taxpayer, or voter, or office-holder, but the cultivated, free individual who is the true aim of all social progress.

This type of society, described by Aristotle as the result of his profound studies of various forms of social life, this type of society after which humanity strives in all its social metamorphoses, discarding one form after another as crude and inadequate for the purpose of a good social life, this type has for its sole object *not the structure* of society, the welfare of great institutions and the building of vast empires, *but solely the highest development of the free, cultivated individual*. Such a type of society the sole object of which is the happiness and cultivation of Man may be characterized as *functional*, or *humanistic*, based on the principle that in the universe there is noth-

ing greater than Man, and in Man there is nothing greater than Mind, or Reason. Societies whose object is the organization of a strong, centralized structure, the State, with its empire-building tendencies at the expense of life and liberty of the individual components may, from their nature, be characterized as *organic, or structural*.

In societies of the structural organic type centralization and organization with hypertrophy of structure are above rationalization and individualization with an ever greater tendency to cleavage of the conscious self from the subconscious self. Roughly classified, civilized, structural, organic societies may be theocratic, aristocratic, timocratic, and democratic. In theocratic societies, the priests representing the conscious activity, usurp the government, such as in Egypt and India. In aristocratic societies the nobility of birth and wealth, representing the intelligence of the people, assume the rôle of social control, while the rest of the population are kept in bondage and ignorance. Such conditions are found in many Greek states, in the Roman state, and in the societies of the Middle Ages, as well as in the states of modern Europe before the revolutions, in England, Germany, France, Russia, and Austria-Hungary. In timocratic societies the rich, or propertied classes represent the conscious control, relegating the other classes to the regions of the passive subconscious. In democratic societies of modern times the power is in the hands of the people, really dominated by the middle classes, business men, professionals, labor aristocracy and their leaders who possess control of the masses which form the subconscious strata of social life activities. Thus throughout the forms and history of structural, organic societies there is present a cleavage of the conscious from the subconscious,—the conscious control of classes as against the subconscious activities of the masses.

Classes *versus* Masses may be characterized as the main cleavage of organic societies. That is why the whole history of humanity which, until our present times presents the evolution of societies, associations, and generally of social aggregates, based on structural organic lines, is full of conflicts of classes and masses. History is full of struggles of the powers of the conscious classes with the subconscious forces of the masses. This massive subconsciousness, predominating in the type of organic societies, gives to the society as a whole the psychological tone of the subconsciousness, the character of which is suggestibility, normal and abnormal, subject to the nature, conditions, and laws of subconscious trance states. In other

words the *plane of cleavage in structural organic societies is along the lines of the conscious and the subconscious with consequent dissociation of the two*. Hence, the ever present danger of predominance of abnormal suggestibility, and precipitation in a general state of social hypnosis. *Social suggestibility and social somnambulism form the main traits of structural, organic societies*.

From this standpoint we may well understand why Tarde and many other sociologists lay so much stress on social imitation and even somnambulism as the very nature of society; for imitation is but another term for what may be more fundamentally described as suggestibility.

As a matter of fact when the great sociologist, Tarde, comes to examine more closely the basis of social imitation, he falls back on social hypnotization as the nature of social life. This social hypnotization, as we have found, depends on the stage of the social dissociation of the upper, controlling self from the lower, suggestible, subconscious self, or mass-subconsciousness. "The social, like the hypnotic state" writes Tarde "is only a form of dream (Tarde should rather say *trance-state*), a dream of command and a dream of action. Both the somnambulist and the social man are possessed by the illusion that their ideas, all of which have been suggested to them, are spontaneous. . . . Because this magnetization (or hypnotization) has become more general or mutual we err in flattering ourselves that we have become less credulous and docile, less imitative than our ancestors. This is a fallacy, and we shall have to rid ourselves of it." Tarde comes to the conclusion that "*Society is imitation, and imitation is a kind of somnambulism*." There is a good deal of truth in Tarde's view of social life. What Tarde does not realize is the fact that his generalization holds true only of organically constituted societies, but not of all societies, and it is certainly not true of humanistic communities. Tarde's sociological generalization is but part of the truth. The definition of society in terms of hypnotization or somnambulism holds true of societies in which social dissociation is present. In other words, in structural, organic societies there is a weakening, or lack of development, or inhibition of the upper, critical self from the lower suggestible self with the consequent manifestation of subconscious elements and predominance of subconscious activities. This condition, as we have pointed out, and which cannot be emphasized too much on account of its importance, holds good in most, if not all societies, known to us from history, societies in which the organ-

ic, institutional structure of centralization predominated over the freedom of individual activity and the critical independence of personality.

Where social life runs in moulds, hardened by civilization of specialization, crystallized in caste, class, group, league, and various other organizations of a highly complex structure, there the social aggregate tends to develop more and more connective tissue fibre of the inactive, supporting type. This gradually crowds out the living elements, smothers the individual units, paralyzes the activities of the upper self with its controlling, rational consciousness, leaving exposed the lower, automatic consciousness with its characteristic abnormal suggestibility and docility to the stimuli and suggestions, coming from the external environment, and results in a permanent state of trance hypnosis, subject to all forms of gregarious plagues and mental epidemics. For all organic societies are based on subconscious activities which are but feebly held in check by a weak-minded upper self. Such human aggregates run wild in fads, crazes, manias, epidemics, plagues, mobs, riots, wars, without in the least making any real progress or in the least improving their wretched social state. It is not the humanistic type of society, but the organic, subconscious type of society which is the suggestible victim and miserable subject of hypnotization.

The fate of organic aggregates is sealed from the very start of their career. Organic societies, if left to themselves, may become stationary, or static, as it is sometimes termed, stagnating for centuries, like Egypt, India, China, and Byzantium, until destroyed by the onset of a young, vigorous society in which the structural elements have not yet gone far in their development, the living individual elements having still retained their social vitality and independent upper, personal consciousness, so that the social self has not yet sunk into the decadent, massive, subconscious with its characteristic abnormal suggestibility, and its hypnotic trance state. This young aggressive aggregate, once it has taken the course of organic, social development is, in its turn doomed to a similar fate. The ancient Babylonian and Hittite empires were destroyed by the Assyrian, the Assyrian and Egyptian empires by the Persian, the vast Persian empire by the Macedonian. After undergoing a process of segmentation the Macedonian empire succumbed to the iron grip of the Roman imperial rule. The Roman empire in its turn underwent a process of segmentation, into the western and eastern portion. The western portion fell a prey to the Germanic barbarians, while the eastern, the Byzantine empire, remained for centuries in a state of ossification, until destroyed by the onslaught of the Turks.

In modern times we witnessed the fall of the Chinese empire at the hands of the Japanese, the great crash of the mighty Russian and structurally well organized German empire, along with Austro-Hungarian and Turkish empires, all falling together into heaps of ruins in the great hurricane of the world war.

As long as societies choose the course of organic growth, of differentiation and specialization, becoming more and more inflexible, unyielding, and rigid, developing an hypertrophy of social connective tissue-laws, regulations, ordinances, commands, commandments, rites, ceremonies, formalities, and all sorts of prohibitions and taboos, and becoming crystallized into leagues, associations, and organizations with their respective constitutions, rules, and by-rules, all tending to stifle and smother the individual consciousness, so long will society be doomed to a state of subconscious activity with a predisposition to social somnambulism, getting, in consequence, afflicted with various forms of social diseases, often malignant in character, subject to riots, mobs, mental epidemics, crazes, and war-maniacs, and if not reformed by some radical revolution into a humanistic social type, ending in decay and death. Complexity of social organization is accompanied by a corresponding diminution of vitality and ultimate loss of life of the social aggregate. As Professor Minot tersely puts it: "With complication of organization the cells lose something of their vitality, something of their possibilities of perpetuation; and as the organization of cells becomes higher and higher (that is more differentiated), this necessity for change (differentiation and organization) becomes more and more imperative. But it involves the end. Differentiation leads up to its inevitable conclusion,—to death." A social aggregate which has chosen the fatal path of organic evolution must succumb to the same law of organic development to which all organisms are subject, namely greater and greater organization, increase of structure, greater differentiation, decrease of critical, personal, consciousness, loss of individual liberty, increased activity of the subconscious forces, falling into a state of somnambulism which can only be *redeemed by revolution or by death*.

A chronological table will show the uninterrupted chain of European mental epidemics:

Pilgrimage epidemic	1000 to 1095
Crusade epidemic, Eastern and Western	
Crusades	1095 to 1270

Children's Crusade	1095 to 1270
Flagellant epidemic	1260 to 1348
Black Death and Antisemitic mania	1348
Dancing mania—	
St. John's dance	1374
St. Vitus' dance	1418
Tarantism	1470
	To the end of the fifteenth century.
Demonophobia, or witchcraft mania	1488
	To the end of the seventeenth century.
War mania—	
The Hundred years' war	1338 to 1453
The Wars of the Roses	1455 to 1485
The Hundred Years of Religious Wars ..	
The Huguenot Wars	1562 to 1629
The Massacre of St. Bartholomew's Day	1573
The Thirty Years' War	1618 to 1648
The War of Austrian Succession	1740 to 1748
The Seven Years' War	1756 to 1763
The French Revolution and	1789 to 1815
The Napoleonic Wars	
The Imperialistic wars of modern times throughout the nineteenth century and ending with the catastrophe of the world war	1914 to 1919
Bringing about the fall of the Russian, Turkish, Austrian, and German em- pires.	
Speculative manias—	
Tulipomania	1634
The Mississippi Scheme	1717
The South Sea Bubble	1720
And business bubbles to our own time. The speculative mania running a career from the highest excitement of busi- ness-revival, ending in a crisis of busi- ness depression in a cycle of ten years.	

If society is to progress on a truly humanistic basis, without being subject to mental epidemics and virulent social diseases to which the subconscious falls an easy victim, the personal consciousness of every individual should be cultivated to the highest degree possible. Every phase of individuality and originality, no matter how eccentric, should

not only be tolerated, but jealously guarded and protected from all assaults and oppressions. All manifestations of individuality and personality, no matter how opposed to our notions and foreign to all our tastes, ideas, beliefs and feelings, should be carefully left to grow and develop without any inhibitions, prohibitions, and punishments, nor branded by social custom and law as "dangerous, seditious, and subversive of the welfare of the state," should not be oppressed and persecuted by organized society and scourged by the scorpions of law and order. We must revert to the Hellenic ideal of a good citizen in a good society as expressed by Thucydides in the person of the greatest of statesmen, Pericles, and clearly stated by the greatest of thinkers, Aristotle: "The full development of a free individuality in a community of equals, aiming at the best life of each individual citizen."

By its famous proclamation that "All men are equals, and are endowed with certain inalienable rights, that among these are life, liberty and the pursuit of happiness" the American Declaration of Independence has made a long step in the direction of the true progress of humanity. The framers of the American Constitution have without any qualifications, whether peace or war, declared the most fundamental elements, requisite for the development of a well-ordered, civilized society by proclaiming in the very first article of the amendments to the Constitution that: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition the government for a redress of grievances." This is a fundamental limitation of congressional powers.

We must say to the credit of the American Congress that never in its history has it attempted to transgress this important right claimed by the Constitution, namely the freedom of speech, liberty of press, and freedom of popular assembly for the redress of grievances. It is certainly to the credit of Congress that no matter under what circumstances, peace or war, it guards jealously over this important right of the individual, freedom of expression in word, in speech, in press, and in assembly. The heroes of the American Revolution fought and died in their struggle with English rule that Liberty should live in the American colonies, in the states of the Union. The price of liberty is eternal vigilance. Congress, in defending the fundamental rights of the people, is ever vigilant that this right of freedom of word, press, and assembly should not for a moment pass from the people

which they represent. Congress sees to it that the humblest person in the land should enjoy this right under all circumstances, war or peace. No post-master, no censor, no attorney-general is permitted for a moment even to meddle with the inalienable right of expressing one's opinion, whether by spoken or by written word, as to the course of public affairs. Congress watches closely over all agencies that no law should be passed and enforced which should in any way interfere with the freedom of the individual and the liberty of speech, press, and assembly which are at the basis of the free American institutions. Not a single paper, not a single pamphlet was ever excluded from the mails, not a single person was ever brought before the courts, nor was any person ever sentenced to jail, nor even fined for freely expressing his opinion, in press or in word, no matter how damning they may be or antagonistic to the laws of that centralized, legislating body. Well may Congress be congratulated for realizing its mission, not passing any oriental, monarchical espionage laws that might in the least rob the individual of his inalienable right to liberty of expression in speech, in print, or assembly. Congress is the guardian spirit of American liberty, seeing to it that not a single law is enacted that may possibly prevent any one giving his opinion freely in public. Congress is the guardian spirit of the country. Every person, however humble, and no matter what his opinion may be, is given full freedom of expression as demanded by the Constitution. For Congress, as the bearer of the spirit of the Constitution, fully realizes that no civilized society may for a moment relinquish this great right of freedom of individuality and liberty of thought and expression by word, by press, and by assembly without sinking into a state of barbarism. Whether we stand at Armageddon and battle for 'the Lord,' whether we fight for the ideal, or sit in the council of the great to make a world of empires fit for democracy, this liberty is like a sacred fire, jealously guarded, like a beacon shining on a hill for the humblest person in the land. For Congress in its anxiety to preserve the word and spirit of the Constitution fully realizes that freedom of individuality and liberty of expression in speech, press, assembly, being the basis of human progress, should be guarded and even specially cultivated before all else, by all well-ordered, progressive commonwealths.

No man is so low as to deserve oppression, no opinion is so mean as to merit suppression. As we look back to the history of the human race we almost invariably find that all fundamental changes of human

life may be traced in their origin to some one individual or group of men, often obscure and humble, whose opinions were regarded as anti-social and dangerous, on account of their extreme radicalism and deviation from the conventional traditions, customs, and beliefs. The Hebrew prophets who set justice above the Hebrew nation, and put righteousness above patriotism which was preached by the false prophets of that time, claiming loyalty to nationalism, were just the few men who dared to give expression to the small, still voice of human consciousness and conscience, and as such were the true bearers of human progress. These great harbingers of human justice were hunted and persecuted unto death by the false patriotic prophets who put loyalty to Israel and Judah above loyalty to humanity. The true country of the prophets was not *soil*, but *soul*. Their countrymen were the just and the righteous of the earth.

What man would have dared even in our modern times of free speech and free press, what man would have dared to proclaim the prophesy of Hosea: "Ye have plowed wickedness, ye have reaped iniquity; ye have eaten the fruit of lies: because thou didst trust in thy way, in the multitude of thy mighty men. Therefore shall a tumult arise among thy people, and all thy fortresses shall be spoiled. . . . As for Ephraim, their glory shall fly away like a bird. . . . Though they bring up their children, yet will I bereave them, that there shall not be a man left . . . Ephraim is smitten, their root is dried up, they shall bear no fruit. . . . My God will cast them away. . . . They shall be wanderers among nations." Such words are not only unpatriotic, but they are also "seditious." When the Assyrian threatened the national integrity of Judah, Isaiah carried to his nation the following message: "Woe unto them that decree unrighteous decrees, and that write grievances which they have prescribed; to turn aside the needy from judgment, and to take away the right from the poor of my people, that widows may be their prey, and that they may rob the fatherless! . . . O Assyrian, the rod of mine anger, and the staff in their hand is mine indignation. I will send him against an hypocritical nation, and against the people of my wrath will I give him a charge, to take the spoil, and to take the prey, and to tread them down like the mire of the street." . . . Is not it a clear case of "sedition?" Is it not "giving aid and comfort to the enemy?"

When again the shadow of the later Babylonian empire fell on the small kingdoms of Asia minor, and the Jewish state was in immi-

nent danger of destruction, Jeremiah had the courage of proclaiming the patriotic prophets false. The true message to his nation was total national collapse which he claimed they fully deserved: "Lo, I will bring a nation against you from afar, O house of Israel, it is a mighty nation. . . . And they shall eat up thine harvest, and thy bread, which thy sons, and thy daughters should eat; they shall eat up thy flocks; they shall eat up thy vines and thy fig trees; they shall impoverish thy fenced cities, wherein thou trustedst, with the sword. . . . And the carcasses of the people shall be meat for the fowls of heaven, and for the beasts of the earth." Even when the Chaldeans besieged the Jewish capital, Jeremiah declared to the king: "Thus saith the Lord; Behold I will turn back the weapons in your hands wherewith you fight against the Chaldeans which besiege you, and I will assemble them into the midst of this city. And I myself will fight against you. . . . And I will smite the inhabitants of this city, both man and beast; they shall die of a great pestilence." These are not patriotic speeches. From our standpoint they are not only full of sedition, but of the worst form of treason. Still it was Jeremiah who proved in the right, and the false prophets of nationalism and patriotism in the wrong. This is the soul of the prophet's burden: *Justice is above my nation, and righteousness above my people.*

The prophets were but few individuals among nations and tribes, vibrant with nationalism of the narrowest type, but it was just these few chosen spirits and not the multitude of false patriots who gave voice to the tendencies of true human progress. The prophets were seized by the authorities, sentenced, mobbed, tormented, and killed, but their spirit lived, while kingdoms succumbed, empires vanished, and nations perished. The acts and decrees of the great Assyrian, Egyptian, Babylonian, and Persian monarchs lie buried in the ruins and dust of their once magnificent palaces, but the living words of the few humble men, the prophets, ring loud and true across the gulf of ages. Insignificant as those men might have been in the courts of a Sargon, Tiglath-Pileser, Esarhaddon, Cyrus, and Darius, it was none-the-less those lowly men who stood for human progress, and transmitted to humanity the precious treasures of human ideals.

The Gospel of Christ and his apostles ran counter to all Jewish tradition as represented by the Pharisees and Sadducees. Christianity conflicted with the imperial patriotism of the Romans. Cruel persecutions followed. The great historian, Tacitus, regarded the Chris-

tians with horror as we do anarchists and Bolsheviks, and he branded them as "the enemies of the human race." The mild Pliny in his report to emperor Trajan considers the Christians as deserving of punishments from a purely civic principle of subduing the obstinate and the obdurate. A quotation from Pliny's correspondence is both interesting and instructive as a warning to our own times: "The method I have observed," Pliny, as Governor of the province of Bythinia, reports to emperor Trajan "towards those who have been brought before me as Christians is this: I asked them whether they were Christians; if they admitted it, I repeated the question twice, and threatened them with punishment. If they persisted, I ordered them at once to be punished. For I was persuaded, whatever the nature of their opinions might be, a contumacious and inflexible obstinacy certainly deserved correction. . . . According to your commands, I forbade the meetings of any (Christian) assemblies. . . . I judged it necessary to endeavor to obtain the real truth, by putting two female slaves to torture, who were said to officiate in their religious rites, but all I could discover was evidence of an absurd and extravagant superstition. I deemed it expedient to adjourn all further proceedings in order to consult you. For it appears to me a matter highly deserving your consideration, more especially as great numbers must be involved in the danger of these persecutions. . . . In fact, this contagious superstition is not confined to the cities only, but has spread its infection among neighboring villages and country. Nevertheless, it still seems possible to restrain its progress." Pliny's opinion was the mildest statement made by a Roman official on the character of the despised Christians.

As the Christians grew in numbers they were no longer regarded in the light of superstitious, misguided people, but as people who were dangerous to the foundations and pillars of society. The Christians were accused of being cannibalistic, ghoulish in their religious services; it was charged that at their secret meetings they drank the blood of children as a sacrament, that they consumed the flesh of human victims as a sacrosanct piaculum, that they were drunk with human blood, and generally rejoiced in offering theanthropic victims to Christ, a crucified, criminal Jew. The Christians were abandoned criminals and degenerates who hated mankind, who delighted in excess, in ruin and destruction of civilization. The Christians were accused of crimes more heinous and nefarious than those brought at present against anarchists, Bolsheviks, and I. W. W. Incendiary

crimes in large cities throughout the empire, conflagrations in Rome, robberies, incest, foul murders of men, women, and children for sacrificial purposes were charged against those inhuman Christians who consorted with slaves and with criminals of the most abject and depraved kind, belonging to the Spartacus group, full of sedition and treason, conspiring for the overthrow of the Roman government, and undermining the most sacred foundations of human life.

The writers of the day could not find words abusive enough to express the villainy and depravity of those Christian vipers who breathed poison and hatred for the human race, those Christian deniers of Gods and of all things divine, those cannibal atheists who delighted in the seduction of poor, ignorant, misguided slaves, those Christians who entertained the absurd superstitions of that degraded and debased, and abject race, the Jews, the Gypsies of the Roman world, those Christians who delighted in the desecration of all that is true, good, and beautiful, who enjoyed the profanation of all that is pure and holy to man. Christianity was a plague which threatened with infection the body-politic and with pollution the very sources of society, a fatal scourge that surely tended towards dissolution of all ties, sacred to family, society, and humanity. Christians were moral lepers. No punishment, no torture was adequate for such fiends in human shape. Such were the terrible charges brought against the Christians, accusations circulated among the populace by writers, by reliable witnesses, government agents, informers, professional spies and detectives, and by respectable citizens. The Christians were "the enemies of the human race," the sworn foes of all law and order, and as such, they were hunted by police, by the populace, they were mobbed, jailed, deported, impaled, crucified, thrown to wild beasts on the arena, or hanged as flaming torches in the public parks or in Caesar's gardens for the amusement of the people. Even the imperial, ethical philosopher, Marcus Aurelius, joined in the hunting down of "the superstitious" and dangerous Christians.

Pliny's assurance that the spread of Christianity could be stayed was not realized. Christianity could not be stayed by the force of edicts and persecution. Christ and his small band of disciples triumphed; lowly and ignorant as they appeared to the haughty Roman patricians, mean as the Christians appeared to the aristocratic Sadducees and the learned doctors of the law, because Christianity originated among the poor and the lowly, the slaves and day-laborers, carpenters and fishermen, still it was just these few individuals who really constituted the ad-

vance guard of true human progress. What Tacitus, Pliny, Marcus Aurelius with all their culture deemed "an absurd and extravagant superstition, a contagion and infection" turned out to be the beacon light of humanity. Those whom the great Romans regarded as "the enemies of the human race" we, who have the advantage of historical perspective, now glorify as saintly martyrs who have given their lives for the highest principles of humanity. The stone which the builders neglected hath become the corner stone.

No opinion should be disdained and scorned. No individuality should be suppressed and crushed. The manifestation of individuality and originality should in every well-ordered and progressive community not only be persecuted, but on the contrary it should be cherished, protected, and cultivated as the *fons et origo* of civilization and human progress.

If we wish social life not to become stationary and stagnant, we should give free scope to all individuality and originality, no matter how eccentric they may seem to us. We should allow free play to all opinions, doctrines, and expressions of human thought, no matter how absurd and contagious the superstitions may appear to us. New ideas, ideals, and beliefs should not be persecuted but should rather be left for discussion and criticism, because we should not assume that we are in possession of the whole truth, and that no further advance is possible. We may learn from other people who look at the world from a different angle, and thus may be able to see things in a different light which may either add to the truth which we already possess, or may even transform it by some new additional element or principle which at first may appear to us as bizarre and paradoxical.

Even such simple sciences as Geometry, Physics, and Astronomy were revolutionized by principles which appeared quite absurd and paradoxical to the learned profession. What was more absurd to an Egyptian Ahmes than the assumptions of surfaces without thickness, of lines without breadth, and of points without any dimensions whatever? The principle of inertia appeared in opposition to the commonsense of antiquity. Heavenly bodies must have the support of crystal spheres, the assumption that they revolve in space without any support seemed absurd. The assumption by Newton that the force of attraction is transmitted through space instantaneously and without any known medium appeared paradoxical even to such a mind as Leibnitz. It was not long ago when a well known professor in

Physics in one of the greatest universities thought that there was not any more original work to be accomplished in the domain of physical science. Then came the Roentgen X-ray and the radio-active forces which have revolutionized science. A physicist of high standing confessed to me that when rumors of the X-ray properties and of radio-active forces began to circulate in the papers as miracles of science, he sat down to write a series of scientific papers on the "extravagant superstitions" of the X-ray and radium. The existence of antipodes was a standing joke and an example of absurdity among the scientists of antiquity. When Mayers discovered the law of conservation of energy every scientific journal refused to publish his work, and the great discoverer died of a broken heart in a sanitarium. Ohm lost his position when he discovered his great law of electricity. Dr. Jenner lost his practice when he gave to the world his method of vaccination. These instances can be multiplied indefinitely. Men hate new ideas of a radical character and are terrified by radical innovations in practice, especially when the innovations are of a political, and more so when of a social, religious, or economic nature. It is told that a workman came to one of the Roman emperors, Trajan or Hadrian, with a newly discovered metal that looked just like silver. The emperor had the inventor arrested and had him beheaded, fearing that the new metal might undermine the silver currency of the empire. While we rarely deal out such rewards to inventors and discoverers, any new ideas of a radical or revolutionary character are still met with social ostracism and governmental persecution. This rooted tendency of disapprobation of new ideas and innovations as generally bad and harmful is well illustrated by the remark of a Chinese sage in Confucius' Analects: "Nang-kung Kwoh, who was consulting Confucius, observed respecting *I*, the skillful archer, and Ngau who could propel a boat on dry land, that neither of them died a natural death; while Yu and Tsih, who with their own hands had labored at husbandry, came to wield imperial sway." This Chinese remark clearly reveals the fear not only of innovations, but also the fear of all originality, talent, and genius. The unusual individual comes to an untimely end. And the time was when the unusual was shunned as a plague, and the unusual individual was actually put to death.

The value of freedom of opinion is by no means lessened even if the given opinion on examination turns out to be wholly false. For the true value of an opinion is not so much in its *truth* as in its *freedom*. In our search for truth we should be anxious for every ray of light that

might *possibly* elucidate the subject from a different angle. The failure of the opinion in actually finding such an angle does not matter, more important is the open-mindedness which the free thinking man should constantly maintain. We must have as many opinions as possible to select from, true or false, or only partly so, and use our critical selective sense. The keeping alive of this critical selective sense is of the highest moment in man's rational life activity. In the rational equipment of the human mind it is of the utmost consequence to keep the edge of the critical sense bright and keen. In the course of examination of some new opinion which may afterwards be rejected some new sidelights may appear which may give a deeper insight into the nature of the subject, whether it be of a theoretical or practical character; some new views and modes of thought, new methods may be suggested which in their turn may result in the evolvment of new principles and important laws. ✓

In the general history of science and in the history of each individual investigation we find this freedom of thought and critical sense ceaselessly at work. Rarely, if ever, do we strike in science the truth at a flash. We usually pass through a series of hypotheses, theories, speculations, and experimentations, often false or defective. Ever new lines of thought are struck out and new ways of experimentation are undertaken only to be rejected again and again. They who have undertaken a series of experiments on any subject realize the amount of work requisite before even the preliminaries may be started well under way. There must go on a ceaseless selection, an active criticism which is merciless to itself, ever hostile to routine, ever awake to new points of view and better methods of work, ever welcoming a different, but truer and better way of handling and treating the facts, observations, and experiments, ever ready to modify and change the course of the work, now in one place, now in another, ever retracing the steps of the research now one way, now in another, until some satisfactory and unitary point of view is gained. And still with all that labor one must always be ready to abandon the whole line as false and start on a new track, ever revising his work, ever criticizing each step in advance, ever doubtful, looking at the work as if it might be on the false track, allowing for error, alive to new facts which may contradict the methods of observation and experimentation or the apparently established facts, rejecting hypothesis and theories which are attractive, or which have become endeared to the heart of the investigator, either because they are his

pet view, or because they fall in line with his previous works, or because in sheer desperation of finding a sure, true, definite path in the jungle of facts he decides to adhere to one course and follow up one trail which may be entirely misleading and end in a blind alley from which he must once more retrace his steps, and start all over again. Of all that the true investigator must be acutely conscious, if he wishes to track the truth. The truly indefatigable and earnest investigator must be keenly conscious of failures, shortcomings, both of method and result. He must look at his truth as if about to be false, and at falsehood as if about to be true. Everything is relative, and nothing is final. It is only by such an attitude of mind and such a mode of procedure that truth can be attained.

If ceaseless vigilance is the price of liberty, more so is it true that ceaseless criticism of ever new opinions and ever new views, however distasteful, bizarre, and paradoxical, is the price of truth. For we must keep in mind the fact that truth does not come as *deus ex machina*, or like Athena out of the head of Zeus, but must be found after persistent, laborious, painstaking searching of heart, mind, and fact. Truth is in the deep, as a Greek sage puts it. One must dive again and again often bringing up nothing but brilliant falsehoods before the homely truths are found.

It is by a devious course of long search and patient testing of apparent truths and falsehoods that the investigator may be assured that he has got a hold of the truth, and even then he must be constantly on the look-out never to relinquish a re-examination of it so as to gain an understanding of its actual relationships, of its limitations and relativity that the truth may not slip away after all by a dogmatic position and by the neglect of circumstances and unforeseen conditions which he may have omitted to take into consideration, or by not bringing it into line with work and discoveries in other directions. By over-generalizing he may lose much that is vital in the truth and thus lay more stress on the false than on the true. Recent ruthless criticism of all that is dogmatic in Mathematics, Logic, Physics, Biology, and other sciences have resulted in new points of view and in the opening of new horizons for investigations which have revolutionized the sciences themselves. This sense of ceaseless active criticism must be kept alive and keen, if science and truth are to keep on advancing. It is due to this critical sense turned on the fundamental principles and postulates of science that such phenomenal progress has been made recently in the domain of science and human thought. This critical sense must be kept fresh

and alive, if human thought and love of truth are not to fall into a state of hebetude and desuetude.

The manifestation of the apparently false opinion keeps thought awake; it constantly challenges us, making us review again and again our established truths, and contributes to an ever deeper realization of what has been gained by severe thought and hard labor. The freedom of the seemingly false opinion and our tolerance of it and our willingness to meet with it in the open help test the validity of truth while keeping alive the critical sense which is the main spring of all advancement of human thought and is the vital point, the very soul, of all human progress. In a certain sense it may be said that *it is the function of the false to keep the truth alive*. The suppression of the freedom of thought or the liberty of individual expression, whether in speech or in press, is the crushing of all true human progress. Thus science, Sociology, Social Psychology, all go to confirm the same central attitude towards the free manifestation of individuality in the life existence of a well-ordered, progressive commonwealth.

The great philosopher, logician, and economist, John Stuart Mill, known for his candor and moderation, entered a strong plea for the liberty of the individual. Mill's work '*On Liberty*' is so well known that I almost hesitate to quote from it, and still the work is of such importance that I cannot resist the temptation of making a few quotations from it, even if they be somewhat lengthy: "People" Mill writes "think genius a fine thing, if it enables a man to write an exciting poem, or paint a picture. But in its true sense, that of originality in thought and action, though no one says that it is not a thing to be admired, nearly all, at heart, think they can do very well without it. Unhappily this is too natural to be wondered at. Originality is the one thing which unoriginal minds cannot feel the use of. They cannot see what it is to do for them. How should they? If they could see what it would do for them, it would not be originality. The first service which originality has to render them is that of opening their eyes: which being once fully done, they would have a chance of being themselves original. Meanwhile, recollecting that nothing was ever yet done which someone was not the first to do, and that all things which exist are the fruits of originality let them be modest enough to believe that there is something still left for it to accomplish, and assure themselves that they are the more in need of originality, the less they are conscious of the want.

"In sober truth whatever homage may be professed, or even paid, to real or supposed mental superiority, the general tendency of things throughout the world is to render mediocrity the ascendent power among mankind. . . . At present individuals are lost in the crowd. . . . The thinking (of the masses) is done for them by men much like themselves, addressing them or speaking in their name, on the spur of the moment, through the newspapers. I am not complaining of all this. I do not assert that anything better is compatible, as a general rule, with the present low state of the human mind. But it does not hinder the government of mediocrity to be a mediocre government. . . . In this age of mass-action the mere example of non-conformity, the mere refusal to bend the knee to custom, is itself a service. Precisely because the tyranny of opinion is such as to make eccentricity a reproach, it is desirable, in order to break through that tyranny, that people should be eccentric. Eccentricity has always abounded where and when strength of character has abounded; and the amount of eccentricity in a society has generally been proportional to the amount of genius, mental vigor, and moral courage which it contained. That so few now dare to be eccentric, marks the chief danger of the time. . . . There is only too great a tendency in the best beliefs and practices to degenerate into the mechanical; and unless there were a succession of persons whose ever recurring originality prevents the grounds of those beliefs and practices from becoming merely traditional, such dead matter would not resist the smallest shock from anything really alive, and there would be no reason why civilization should not die out, as in the Byzantine empire.

"It is not by wearing down into uniformity all that is individual, but by cultivating it and calling it forth, within the limits imposed by the rights and interests of others, that human beings become a noble and beautiful object of contemplation; and as the works partake the character of those who do them, by the same process human life also becomes rich, diversified, and animating, furnishing more abundant aliment to high thoughts and elevating feelings, and strengthening the tie which binds every individual to the race infinitely better worth belonging to. In proportion to the development of this individuality, each person becomes more valuable to himself, and is therefore more capable of being valuable to others. There is a greater fullness of life about his own existence, and when there is more life in the units there is more in the mass which is composed of them.

"There is one characteristic of the present direction of public opinion, peculiarly calculated to make it intolerant of any marked demonstration of individuality. The general average of mankind are not only moderate in intellect, but also in inclinations; they have no tastes or wishes strong enough to incline them to do anything unusual, and they consequently do not understand those who have, and class all such as wild and intemperate whom they are accustomed to look down upon. . . . There is a moral and prudential spirit abroad for the exercise of which there is no more inviting field than the moral and the prudential improvement of our fellow-creatures. These tendencies of the times cause the public to be more disposed than in former times periods to prescribe general rules of conduct, and endeavor to make every one conform to the approved standard. Its ideal of character is to be without any marked character; to maim by compression, like a Chinese lady's foot, every part of human nature which stands out prominently, and tends to make the person markedly dissimilar in outline to commonplace humanity. Instead of great energies guided by vigorous reason, and strong feelings, strongly controlled by a conscientious will, its result is weak feelings and weak energies which therefore can be kept in outward conformity to rule without any strength either of will or of reason."

Thus we are brought once more to the same view from which we started that the essential factor in human progress is the cultivation of the upper controlling, critical, personal consciousness. "The only unfailing and permanent source of improvement" says Mill "is liberty, since by it there are as many possible, independent centres of improvement as there are individuals." . . .

In these times of human agony, when the individual is crucified for social glory and national power, when men are sacrificed by the millions and their labor by the billions for the grandeur of the nation, when the world is made safe for all sorts of 'cracies' by fire and sword, it may be well to give heed to the following reflections by Tocqueville and Tarde:

"In democratic societies" as Tocqueville remarks "majorities as well as 'capitals' have prestige. As citizens become more equal and more alike (as far as their subconscious is concerned, regarded from the standpoint of Social Psychology) the tendency of each to believe blindly in a given man or class, diminishes. The disposition to believe the masses increases, and public opinion guides the masses more and more. Since the majority becomes the real political power, the uni-

versally recognized superior, its prestige is submitted to for the same reason as that of a monarch or nobility was formerly bowed down to. Moreover, in times of equality (of the mediocre subconscious considered from the point of view of Social Psychology) men have no faith in one another, because of their mutual (subconscious, mediocre) likeness. This very resemblance, however, inspires them almost with an unlimited confidence in the judgment of the public. For it seems improbable to them that when all have the same amount of light, the truth should not be found on the side of the greatest number." "This appears logical" comments Tarde "and mathematical. If men are like units, then it is the greatest sum of these units which must be in the right. In reality this is an illusion, based on constant oversight of the rôle played by imitation. When an idea rises in triumph from the ballot-box, we should be less inclined to bow down before it, if we realized that nine hundred and ninety-nine thousandths of the votes that it polled were but echoes. Unanimities should be greatly distrusted. Nothing is a better indication of the impulse of imitation." In other words, with the increase of mental disaggregation in a crowd of (subconscious) mediocrities individuality and the critical self are at a minimum, the subconscious self is left unprotected, a target to the arrows of suggestion. Social suggestibility is at its maximum, and the body-politic is thrown into hysterical convulsions of mob-frenzies, into maniacal, nationalistic excitement with fixed paranoidal delusions of national grandeur, demoniacal obsessions of world-dominion, resulting in homicidal and suicidal world-wars.

What then is the remedy for all those human sufferings, virulent mental epidemics, and other severe social maladies that plague mankind in its aggregate capacity? Only one answer is given by science, by Biology, Sociology, and Social Psychology: *Fortify the resistance of the individual by freedom of individuality and by the full development of personality. Immunize the individual against social, mental plagues by the full development of his rational reflective self, controlling the suggestible, automatic subconscious with its reflex consciousness.* Put no barriers to man's self expression, lay no chains on man, put no taboos on the human spirit. Do not, like the savage, run man's mind and skull into ugly shapes and distorted moulds of social traditions. Liberate man's spirit from the dark, narrow, and oppressive, social dungeon. Full freedom of individuality and cultivation of the critical rational self constitute the essential conditions of a healthy social consciousness. The full development of a synthetic unity of the conscious

in control of the subconscious in a pure atmosphere of liberty is sure immunity against all mental plagues, and is at the same time the source and aim of all true human progress.

Here we may pause for the present. As far as our present purpose is concerned Social Psychology needs not take us any further. Perhaps, the words of Professor Minot's may be appropriated here where we have laid so much stress on the Logos, on Thought, on Reason, as being the savior of humanity: "The time, I hope, will come" says Professor Minot "when it will be generally understood that the investigators and thinkers of the world are those upon whom the world depends. I should like, indeed, to live to a time when it will be universally recognized that the military man and the government-maker are types which have survived from a previous condition of civilization, not ours; and when they will no longer be looked upon as heroes of mankind. In that future those persons who have really created our civilization will receive the recognition which is their due. Let these thoughts dwell long in your meditation, because it is a serious problem in all our civilization to-day how to secure due recognition of the value of thought, and how to encourage it. I believe every word spoken in support of that recognition which is due to the power of thought is a good word, and will help forward toward good results."

When the great American biologist made this earnest appeal to his countrymen had he had a foreboding of the approaching storm of the world-war with all the horrors of frenzied militarism which has obsessed deluded humanity?

One thing stands out clear and distinct, and this is,—the source and aim of true human progress are *the cultivation and development of man's self-ruling, rational, free individuality*. This is also Man's happiness. For as the great Stagirite puts it: ἡ εὐδαιμονία τῶν ἀνθρώπων ἐστίν.

BOOKS RECEIVED

A Book of Remarkable Criminals. By H. B. Irving, George H. Doran Co. Pp. VIII and 315. \$2 net.

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ORIGINAL ARTICLES

LEVITATION DREAMS: THEIR PHYSIOLOGY

LYDIARD H. HORTON

FOREWORD—This paper recapitulates and amplifies certain data about the illusion of levitation that were previously published in the form of letters to Dr. Morton Prince.—The further advance, here outlined, represents investigations that have been carried on by "psycholexic" or descriptive, as distinguished from the prevailing psychometric, methods. These steps, in a field ordinarily shunned by psychologists, would have been impossible without the inspiration of Morton Prince's own pioneering methods in fields similarly shunned many years ago: those of association-neuroses and of shifting personality.

TO FLY, float or otherwise displace oneself through thin air without any aviating device whatsoever is an accomplishment obviously as far from actuality to-day as ever it was before the present era of man-birds. Yet undoubtedly from time immemorial, dream life has afforded just such a pastime to no inconsiderable proportion of mankind.

This experience is fraught with a fuller sense of exhilaration than usually befalls the aviator in his passage through the sky. They who know the Flying Dream always testify to the extraordinary feeling of reality which accompanies its special manifestations, and they usually acknowledge the touch of ecstasy which so often completes this welcome visitation from the unknown.

DREAMS AS STARTING POINTS OF MYSTICISM

It is interesting to note that the peculiarly vivid floating sensation which comes in dreams is not always taken by the dreamer to mean that he or she is flying. A more bizarre construction may be put upon that sense of bodily lightness, of freedom from the sense of gravity, which

is so characteristic. For example, one may cite the conviction of many religious mystics that they were being borne aloft by angels. The same class of observers become imbued, like Saint Peter, with the belief that they can walk on water, or persuade themselves that they have been privileged to enter into direct personal union with the all-pervading Godhead. As Aristotle might say, these varieties of religious belief testify to great unity in the state of Sensibility, but to great diversity in the Understanding and Opinion. (1).

While occupying ourselves with the underlying fact—the cause of the floating sensation—we shall do well to consider those queer and erroneous ideas which have been entertained about this phenomenon and which today stand in the light of a true understanding of it.

Touching on the errors of the primitive mind, Thomas Hobbes remarks that mythology arose from the "ignorance of how to distinguish dreams and other strong fancies from vision and sense." (2). To this deception he ascribes the worship of "satyrs, fauns, nymphs, and the like; and now-a-days the opinion that rude people have of fairies, ghosts and goblins and the power of witches." The plausibility of this view of dreams as incitements to mystical notions is not contradicted by anything we know of the history of superstitious belief. It has even been reinforced by so modern a writer on dreams as Vold, who refers especially to the flying dream. His work ("Experimental Dream Production") carries a curiously colored assumption that the whole phantasy of levitation is rooted in *erotic* motives; he cites particularly the representations of witches and charmers riding through space. Thus he pre-judges the whole matter at issue. His data serve, however, to emphasize the fact that this dream is second to none in the hold it retains upon the popular fancy.¹

EARMARKS OF THE CONDITION

The sense of elation, of final achievement in the accomplishment of the imaginary flight is a common feature of the Flying Dream. It is often tinged with the memory of former disappointments now gloriously redeemed and ennobled by a certain altruistic desire to reveal the new power to the rest of the world—a truly "generous" emotion. There is also a distinct sense of well-being, a normal or super-normal euphoria, akin to ecstasy.

¹We may say that explanations based on erotic sensibility, wherever found, fall lamentably short of doing justice to the many features of the illusional state in question. But to show this, it will be necessary to go into the subjective aspect more fully.

One of our best known exponents of abnormal psychology, who had analyzed the phenomenon on his own account, remarked to the writer: "When I find myself thus able to rise by my own power, it occurs to me, 'This time I am sure of myself. It was not so before, but now I have mastered all the details. How easy it is; if only "they" knew!"

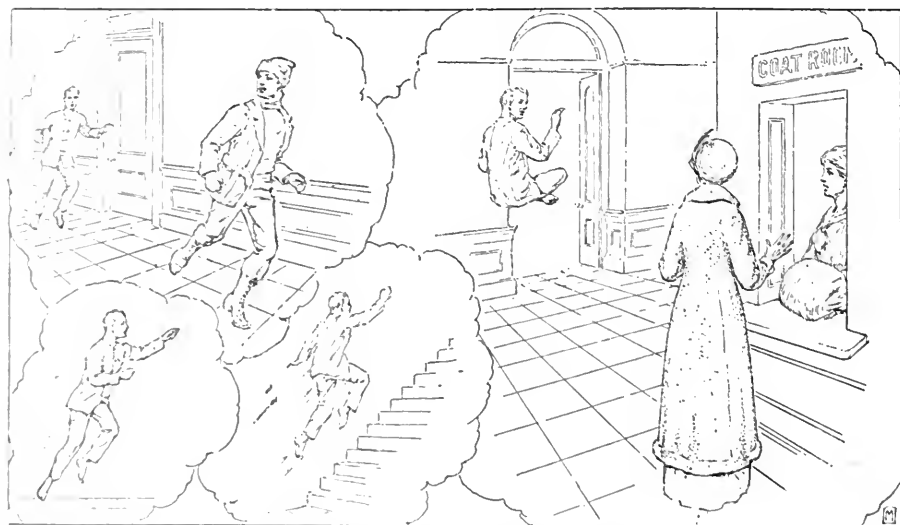
In widening one's range of observations upon similar cases, one finds that the separate instances can be classified so that they intergrade, as it were. At one end is severe alarm and the horror-of-quick-descent; at the other extreme, a milder form of alarm, or merely surprise, mingled with pleasant soaring sensations. This extreme may run into pure delight, and the *emotion of the sublime*. The existence of such a series does not, of course, prove that their different modes or moods could be produced by one and the same cause. This intergradation simply opens up the possibility that two causes with distinctive effects upon the dream fancy may be found in such actual physical relation, in Nature, as to combine their action on different occasions into all sorts of permutations.

As a pertinent example, there is the combination of a flying dream with a dream of falling. The unpleasant sense of falling is exceptional; and dreams in which "levitation" is recognized, figure very consistently in the category of pleasant dreams. The dream of flying, then, suggests normality: a conception prettily emphasized in the melodious language of Sir Thomas Browne in his "Letter to a Friend," where he speaks of the approach of death:—

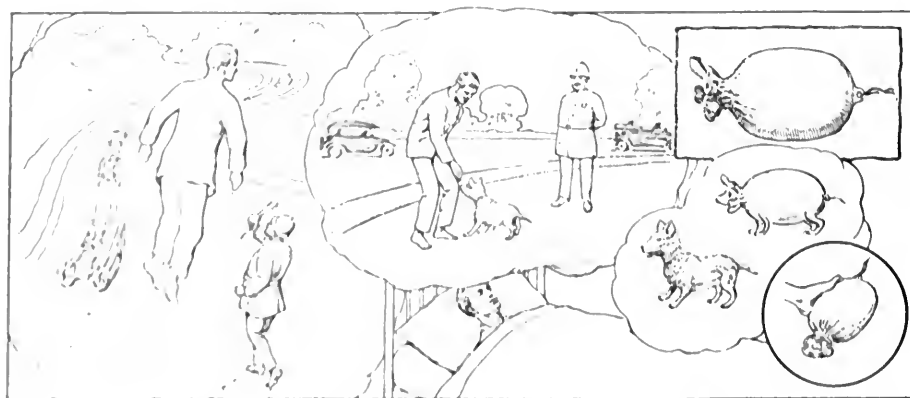
"He was now past the healthful dream of the sun, moon, and stars in their clarity and proper courses. It was too late to dream of flying, of limpid fountains, of smooth waters, of white vestments, and fruitful green trees which are the visions of healthful sleep and at a good distance from the grave." (3).

CONTRASTS WITH DREAMS OF INSUFFICIENT CLOTHING

In contradistinction, there is a type of dream which is suggestive of anything but "clarity and proper courses." It ranks next in frequency and is generally called the Dream of Insufficient Clothing. Unlike the usual situation in the Flying Dream, we appear—e. g. when *en deshabillé* in a public place—to be making a response to the given situation that is evidently *not* the fit and proper one.



THE WARM CLOTHING DREAM
Previously shown as Example Number One



THE DISTURBER OF TRAFFIC DREAM
Previously shown as Example Number Two

As an antithesis to the flying dream, it brings out the fact that the latter affords in every way the feeling of right action and the sense of doing the natural and proper thing. This contrast is particularly noteworthy in those not infrequent cases where the dream of insufficient clothing actually appears as an antecedent of the flying illusion—both following upon a condition of cold or chill in sleep. The explanation almost suggests itself.²

VIVID SENSATIONS

Of all dreams likely to be mistaken for reality, the outright Flying Dream would seem to have the strongest chance. Small wonder then at the goodly number of historic cases where the dreamer actually believed that the power of flight had come to stay, and thereafter carried the belief to the point of trying his skill in waking life—without apparatus, *bien entendu*. Instances are recorded by Herbert Spencer where injury was suffered as a consequence of such clumsy aerial endeavors.

Tending to explain this confusion of belief is the remark of Hobbes that “the most difficult discerning of a man’s dream, from his waking thoughts, is when by some accident we observe not that we have slept.” (2)

A case precisely in point may be found in Munsterberg’s “Psychotherapy.” It is the story of a sick lady who, under the soothing influence of a Christian Science healer, talking to her at the bedside, falls into a reverie and then into a peculiar state (“somnosis”) akin to drowsiness; whereupon she experiences an illusion of bodily rising, matter dissolving around her, detachment from earthly contacts, sense of cosmic greatness, tremendous throbbing, and descent to earth again. The whole experience amounts to a recapitulation of characteristic fancies of the Flying Dream order, but with a striking emphasis on those features which one may properly speak of as *ecstasy*.

²It is worth the remark (which is very obvious after it is said) that clothing sensations and cold sensations are both associated with the *epicritic system*, the fundamental system around which centers much of unwritten or half-written physiology. W. H. Howell’s “Text-Book of Physiology” maintains a clear distinction between this *epicritic sensibility*, which involves delicate discrimination, and the more generalized type of *deep sensibility*; this latter, we may believe, contributes to the floating sensation *per se* its characteristic quality, to wit: the very antithesis of pain, pressure and postural sense.

A CASE OF ECSTASY—INVENTORIAL ANALYSIS

Ecstasy is perhaps best described as a semi-conscious state of relaxation, associated with a certain vacuity of mind or suspension of constructive mental processes. This case of Munsterberg's furnishes a picture of mixed reverie and physiological sleep that any reader can turn to with confidence as to its authenticity. ("Psychotherapy" p. 316). (4).

To be sure, the lady's sense of levitation and the allied phenomena were not identified by her as related to special physiological sources. She described a mysterious condition in which the imaginative features figured as a disguise to the bodily perceptions. But fancies may indeed furnish a sure index to the physiologic state.

To obtain the full conception of her ecstasy it is only necessary to correlate her report with the physiological picture, as we may reasonably suppose it to be. Clarifying hypotheses will mark the possible parallel between mental and physical phenomena in this strange experience, to wit:

Bodily Rising: This may come about through muscular relaxation, which entails marked alterations in the pressure sense. These perceptual changes would be then "projected" i. e. mentally externalized as if they were changes in the outside world, including the abrogation of the law of gravity.

Dissolving of matter: Further lessening of muscular tension and loss of localized sensations would diminish the hold of material concepts upon the imagination; spatial perceptions, contacts, pressures and other attributes of matter are missed by the patient as so many cues that ordinarily cause the recall of existing material surroundings. This is the bare associative fact. Other elements of sheer imagination concur: Mrs. Eddy's *denial of matter* must have come in for some attention, and have played its part in reënforcing that sense of a dissolving world which belongs to drowsiness. At this stage of relaxation the patient blends, into unity, impressions received from two sensory fields: deep sensibility and epicritic sensibility. The tactile sense is, however, not always affected in such cases; as, even in deep relaxation, the tactile discrimination may remain in modified form. (Some of my subjects have reported their contacts as "feeling feathery.").

Detachment from earthly contacts: This is an expression that correctly reflects the relation between epicritic sensibility (tactual changes) and deep sensibility. This mimics a sort of skin-anesthesia owing to the dropping out of the pressure component and to lapsing attention to sensations like those furnished from vasomotor changes ("blood vessel sensations"). This may be called a pseudo-anesthesia

of the skin, simply as a blanket-word to cover the deficiency of any standard conception on this topic. The outstanding fact is that the pressure sense is more obviously modified than the tactile sense. This is a palpable feature of drowsiness and lapsed attention, open to debate and experiment, but not requiring greater precision at this point.

Cosmic greatness and the *sense of swelling* are closely interwoven apperceptions of the disturbance of sensibility caused by the shifting of the blood-bed through vasomotor dilatation of the skin vessels. The physical fact is characteristic of sleep, but easily passes unperceived by the subject. When it is perceived, this dilation is readily apperceived (*ad-perceived*) in various ways: *grandeur, power, absence of limitations, courage, relief*, or what-not, that hinges upon the *absence* of sensation, or may be derived from specific space sensations attributed to the body (like the "growing" of Alice in Wonderland). Further, the same impressions may be projected, "externalized," as fancies of floating objects, of beautiful distances, great heights, infinite views. The agreeable feeling-quality that is the by-product of these "blood-vessel sensations" (cf. Wundt's classification of affective qualities) seems to draw in the esthetic element, and brings us close to what Ethel Puffer has called the "esthetic repose." (5).

As a whole, the importance of this "cue" as obtained from vasomotor relaxation, is due to the exaggeration or *auxesis* that belongs to sleep, wherein, as Aristotle has noted, we literally make mountains out of mole-hills.

Throbbing like a dynamo: Given the vasomotor relaxation we would have a greater perceptibility of the pulse, which would also be—in the drowse—magnified on Aristotle's principle of *auxesis*. In physiology, the greater beat of the pulse under lessened arterial tension is demonstrable as an hydraulic fact: the circulation being regarded as the hydraulic system. Changes in the pulse quality are easily disregarded, but "in the silence of sense" as Hobbes might say, they stand out very sharply, giving rise to apperceptions, that explain such analogies as "throbbing like a dynamo."

The feeling of power: At this stage of vasomotor relaxation—which is coupled also with extreme muscular relaxation—there is often a sudden adjustment of the vasomotor equilibrium that seems to entail a great sense of repose, yet increased capacity for action. This is akin to the effect of treatment by hydrotherapy in which the same circulatory mechanism is played upon. The difference is that the hose of the hydrotherapist does not play upon one in that passive state which is realized in the experiments for relaxation; for the "victim" of hydrotherapy is usually not fully relaxed, but active! Hence, there is not the exaggerated idea of the change in sensation.

The descent to earth: After a time, the biologic purposes of the functions above described (namely the recuperation of the individual and the recovery from over-tension) are attained; there is a lessening

of the several phenomena that appertain to energetic processes of recuperation. To understand this, we must, of necessity, assume the now current view that sleep and allied recuperative states represent an active instinct (Claparède) to antidote fatigue.

It will be seen from these tentative analogies that the floating sensation—there is one such strictly so called—is likely to be overlaid with other elements:—phantasmagoric, confusing phenomena. It is all the more necessary to reach some idea as to what we speak of when referring to the “flying sensation” or “floating sensation,” which is so fundamental in the experiences of pseudo-levitation. (See page 148 for illustrations showing typical dream-scenes.)

THE FLYING SENSATION

As to the psychological nature of the sensation of flying, a caution is here in order. It has been suggested by Hutchinson in his book “*Dreams and Their Meaning*,” (6). It is to the effect that when we say that we feel as if we were flying, we probably give an untrue account of the Flying Dream. For in real life we do not know the sensation of flying, the majority of us. What happens to us is therefore something which gives us the impression that we imagine we should experience if we were flying.³

One may assert confidently that the characteristic sense of aviating or feeling of levitation has little in common with the sensations of real aviators. In the case of aviators, a true “ecstasy” has yet to be demonstrated; although it is certain that in their dreams aviators are

³The relation of the sense of equilibrium (semi-circular canal impressions) to the floating, flying or levitation illusions is one we do not delve into here for fear of confusing the topic. It is probably only occasionally involved; and that more through associative memory than through any direct transmission of impulses from the nerve terminals for equilibrium. Supposing, however, that impulses do come from the latter, would it not be as a consequence of secondary activity of the dreamer under the influence of the dream? When I had vertigo [cf. p. 153] in an experimentally induced falling dream my equilibrium sensations were chaotic because I confounded the real sensations of light-headedness at the time with the usually associated equilibrium sensations. On the other hand, it might be said that compensatory movements were made by me as a reaction to the sense of vertigo following light-headedness. Further, it might be that the sudden loss of blood from the head (bleeding into the body cavity) which was a feature of this experiment, may have produced not only the sensation of light-headedness but also have brought about a local disturbance at the seat of the equilibrium sensations. To determine which supposition is reasonable, or what combination of them should be accepted, is a matter of collating our knowledge of the physiology of equilibrium, and of vasomotion. With the specific reports of aviators' tests available, this should now be possible. But this had better be left for a separate discussion; and, in any case, it is a subordinate matter in the genesis of the levitation illusion.

more likely than others to identify their levitation illusions with their actual experiences in the air.⁴

However that may be, they are few and far between who report anything but positive delight from the typical Flying Dream. This remains true in spite of the fact that these dreams are experienced by certain persons in conjunction with the unpleasant Falling Dream. The only supposition that can reconcile the two distinct occurrences as part of the same dream is that they are apperceptions (necessarily false ones) of two successive phases of the basic bodily condition. This is clearly shown in those examples of levitation (cited in a preceding paper) where one dreads the expected crash of the object floating in space.

Moreover, in one instance—alluded to as having been reported to Dr. M. Allen Starr at the time—I actually produced a falling dream in the course of an experiment for the control of vasomotor relaxation. Specifically, this incident gave rise to, first, (a) marked swelling of the body and (b) floating sensation; and immediately thereafter to (c) falling sensation, as of tumbling through illimitable space (presumably, blood leaving head to enter skin vessels). Somehow, in spite of an awful feeling akin to vertigo, I seemed to realize the possibility of controlling the condition, and promptly startled myself out of it. This is precisely analogous to the experience that occurs in dreams, in which “flying” is followed by “falling;” the horror or fear engendered usually causes one to wake up amid struggle and distress. In such a case, a real aviator will dream of a “nose dive” unsuccessfully managed, which he “comes out of” with difficulty.

THE CONTRIBUTION OF HAVELOCK ELLIS

The professor earlier cited (Dr. J.) said that the origin of the illusion from the “waking standpoint” was still a mystery to him. That was early in 1910. In the October *Atlantic Monthly* of the same year Havelock Ellis published his paper on “Aviation in Dreams;” and I must in justice record that the professor above referred to, with all his knowledge of this class of phenomena, very readily accepted as conclusive—if not final to the last detail—the explanation of Ellis. And for a time it seemed to me too that it would be difficult to carry the study of the matter any further.

⁴The immense extension, in recent years, of the practice of aviation could easily have proved a source of confusion in the present discussion, had not the data on which it is based been gathered long before aviation became at all common in real life.

On second thought, however, one sees that Ellis' paper does not assume—thoroughgoing as he is—the air of a finished interpretation of all the phases of this phenomenon. It leaves open for debate a number of important questions, which we must consider in the present essay. To be sure, Ellis definitely takes the view that the illusion of aviating is provoked by certain localized bodily sensations. Primarily there is, he believes, a diminution of the skin sensations from the surface upon which the body is resting. (My data suggest that this aspect may be due to the diffused sense of vasomotor relaxation). He dwells on the part played by certain irregularities in the action of the heart; and to complete what may be called the bedside or clinical picture of the condition, he mentions certain changes that occur in the breathing.

According to this psychologist, then, three factors concur in the genesis of the Flying Dream; to wit, perturbations of heart action, alterations in respiration, and changes in the sensations from the skin. But these are the chief bodily modifications to be observed in any phase of sleep, dreamless or otherwise. And Mr. Ellis has not pretended to describe these features in a way that would furnish a definite physiological picture of the "somatic substrate" which underlies the illusion of levitation.

The physiological point of view requires a more precise depiction of the bodily events than Mr. Ellis, writing as a psychologist, has furnished in his valuable paper. Is the bodily condition pathological or is it normal? Is it a capricious variable phenomenon or does it afford a definite clinical entity? In answer to these questions, the present intention is to show that the typical Flying Dream can be traced to definite physiological sources.

THE EXPERIMENTAL SIESTAS

Specifically, as I have noted in a previous paper, illusions of levitation arise during experiments in which a characteristic condition (kinesthetic repose) is realized by the subjects. Eight cases out of thirty (in one set of experiments) reported distinct illusions analogous to the flying dream. It has also been made clear that I myself have experienced these various illusions, and states of sleep, as by-products of experimental studies in deliberate relaxation.

Every artificial circumstance was set aside in these experiments and naturalness was made the keynote. This was carried so far as to eliminate from the work any insistent questioning of the subject, such

as is commonly practiced in ordinary introspections of the psychological laboratory. Spontaneous utterances of the subjects formed, at first, the principal basis on which was built the present conception of Kinesthetic Repose.

The idea of naturalness in obtaining the data was carried so far as to fit up a special room in the style of an ordinary study, in an office-building suite, adjoining a quiet University Law Library. There, on a matter-of-fact basis, business men and law students were invited to try intensified repose—as a measure of personal hygiene—while scarcely realizing that they would pass under experimental observation. At the same time, facilities were provided in this room, for more confessedly experimental methods. There was a buzzing fan that could be regulated, so as to produce a pleasant droning sound of any desired intensity and with considerable variations of tone-quality—results obtained by manipulating the air-duct enclosing the fan and by a rheostat in the next room. In this, the outer office, there was a booth, connected by a telephone line with the study. A phonograph, in the booth, made possible the playing of musical or spoken “records,” thus reaching the subject with the minimum of distraction from the operator’s neighborhood. The receiver was, in fact, suspended at the head of the Morris chair. This device made convenient the lulling of a person to sleep, if desired; in any case, it was always possible to waken the subject gradually without entering the room; thus also avoiding uncontrolled sounds that might break up the experimental siesta. Here it may be noted that experimentation of this kind, being aimed at a delicate equipoise, is apt to require the strictest attention on the operator’s part, in order that no untoward noises and chance by-effects upon the subject should interfere with the smooth course of reveries and relaxation. On the other hand, curiously enough, it was found that the installation of noiseless or soundproof surroundings, or any elaborate and pedantic apparatus, neutralized all endeavors to produce normal rest states—what we call “somnoses.”

The most ideal surroundings are those in which there is a moderate amount of stirring from the outside world, mitigated indoors by a certain sense of isolation and security. This much may be said by way of explaining that the sleep-states, although experimentally produced, were definitely related to the environment; as such, they were reactions to a situation; the sleep or rest situation. They were produced under conditions of genuine *leisure*.

 "SOMNOTIC" STATES AS ADAPTED REACTIONS

Among natural responses to the environment, is the type of reaction that I have earlier spoken of as *acopic* (i. e. an anti-fatigue state of muscle-and-nerve relaxation that is methodically induced). In this connexion, the point was made that some "somnoses" may constitute *body-sleep* without entailing a disturbance in the awareness of the environment. (7).

To put the matter differently, a truly *acopic* method for inducing special states of attention and of relaxation should not in any way be regarded as an anesthetic or as a hypnotic or as a form of imperative suggestion would be, i. e. as artificial. For of all these, the principal earmark is the fact that they place the individual *out of relation to his environment* and inhibit responsiveness to the true situation. Somnotic states, experimentally realized by the Acopic Method, appeared to be *adapted reactions* to the biological situation, as presented and described to the subject by the operator; albeit the surroundings (i. e. of quietness and security) were artificially created, in the interest of the experiment. As the experiments went on, this fact became more and more clear, so that in 1908 the conception of the *sleep situation* as something to which the individual reacts biologically through an active instinct, had become more and more realizable in the laboratory. This essentially accorded with Claparède's now well-known writings on the biological conception of an active sleep instinct. Thus, Acopic Method simply means the technique developed by trial-and-error whereby one could play upon innate anti-fatigue tendencies in the organism. From this anti-fatigue viewpoint, the sleep instinct reveals its mechanism as not inconsistent with the survival of consciousness.⁵

THE MID-STATE OF ATTENTION

During the experimental *somnium*, a characteristic mental attitude was found, which often bred experiences of pseudo-levitation. As I have already explained in the letters to Dr. Prince, it was a mid-state of the attention. It was free from effort and to that extent passive; but it had this in common with one's ordinary alertness in the state of vigil ("*état de veille*") that there was no disaggregation of consciousness. The sense of awareness, regarding the environment and the bodily state, remained orderly and was free from those lapses

⁵Mary de Manacéine to the contrary notwithstanding: "Sleep is the resting-time of consciousness." (7).

into drowsiness that usually appertain to one's relaxation of mental and motor processes. It was through the experimental cultivation of this "mid-state" that certain incidental features came to be observed and to acquire special significance, as throwing light upon the genesis of the flying dream and of the related illusions. Associated, then, with the attainment of this mid-state of attention, there were found peculiar alterations of feeling tone, so distinctive and so constant and so well ear-marked that they seemed to require a label and to deserve the name by which I shall again refer to the state, i. e., kinesthetic repose.

Now, among the varieties of kinesthetic sensations in deep repose, there is one particular blend which may be discriminated as the kinesthetic revelation.

This is so labelled by allusion to the "revelatory" quality of this phase of repose, a quality also met with in the well-known anesthetic revelation.

William James has called attention to this sense of revelation in its different forms (ether revelation and nitrous oxide revelation) and thus has brought it within the pale of science—so far as it concerns anesthetics. (8).

Yet, without anesthetics and without hypnotics in the "abnormal" sense of the word, but through sleep induction (Somnotic states) and under conditions just described, my subjects experienced sensations that provoked psychic impressions quite comparable to the "revelation" of anesthesia.

In this peculiar phase of "consciousness under anesthesia" there is—while regaining ordinary consciousness—a very noticeable striving toward an "impossible" utterance of one's ineffable subjective mood. There is apt to be a sentiment as of having been vouchsafed a great and deep understanding "of things," or of having heard some wonderful pronouncement upon the meaning of human destiny. . . . We cannot wander into the field that opens up here, with its vista of debatable ground, belonging to the remote provinces of mysticism, of religion, of ethics and of the spiritual sense. We can only pause to disclaim all sophomoric pretention of destroying any prized spiritual values residing in such experiences, by the matter-of-fact tracing of its physiological groundwork. Otherwise, it would be as if Stendhal, in his "Essay on Mental Geology" should attempt to deny the flowers that bloom on the surface, merely for having traced out the stratifications beneath the soil. (9).

The Kinesthetic Revelation may be regarded as the *ne plus ultra* of the Kinesthetic Repose—and this limit merely expresses the quality of those varieties of rest states that tend to approach it. Simply enough, RELAXATION—mental, motor, or what not—is its asymptote!

Tableau of Conditions Related to Normal Sleep and Dreams

SOMNOTIC STATES	Realized by Acopic Method	{ <i>Mid-state of atten- tion</i> (bodily relax- ation; no fatigue)
	for Regulated and Relaxed Attention	{ <i>Kinesthetic Repose</i> (extreme bodily re- laxation; passive conscious- ness)
	Lapses of Regulated Attention	{ Kinesthetic Revelation Illusion of Levitation Flying Dream

KINESTHETIC REVELATION

That state which we are attempting to visualize has been described as having supremely the character of the ineffable, the Unutterable. Of the nearness of the kinesthetic revelation to the state of reverie or of its kinship to ordinary sleep as a recuperative function, there can be no doubt.

Varying forms of the kinesthetic revelation are definitely recognizable, although difficult to formulate in words, the commonest being: (a) the "illusion of understanding," in drowsy persons and (b) the idea obtained in the course of a dream that one has heard or composed some wonderfully fine and expressive utterance, such as a poem—which, if recollected at all on awakening, turns out to have been commonplace or even nonsensical. Of other features much testimony will be found, confusing to those who have not met the condition in their own direct experience.

What I wish to convey is the fact that, like other illusions of a grosser and more easily described type, the kinesthetic revelation represents the automatic attempt of the mind to respond in articulate thought to impressions supernal to waking experience. The mystery is, however, not beyond intellectual appreciation if we but transpose

our opinions of what we call *waking experience* into the framework of what we may call *sleeping experience*. Is a sleeping person to be regarded as any less truly subject to experiential impressions than a waking person? No, indeed; the experiences may be less, but they are none the less experiences.

In Edgar Allan Poe's "Marginalia" is found a passage in which this supposedly always imaginative author confesses, in a vein of convincing sincerity, that he had once been confronted with this class of human experiences in a way that seemed to defy the power of words. If I read him aright in the illumination of laboratory study, it must have been with the kinesthetic revelation that Poe was experimenting. I have delayed expressing its subtler features till now, perhaps because the very vagueness of the relaxation phenomena in question should be presented by a masterly pen, rather than by my own.

"There is, however, a class of fancies, of exquisite delicacy, which are not thoughts, and to which, as yet, I have found it absolutely impossible to adapt language. I use the word fancies at random, and merely because I must use *some* word; but the idea commonly attached to the term is not even remotely applicable to the shadow of shadows in question. They seem to me rather psychal than intellectual. They arise in the soul (alas, how rarely) only at its epochs of most intense tranquility—when the bodily and mental health are in perfection—and at those mere points of time when the confines of the waking world blend with those of the world of dreams. I am aware of these "fancies" only when I am upon the very brink of sleep, with the consciousness that I am so. . . .

These "fancies" have in them a pleasurable ecstasy as far beyond the most pleasurable of the world of wakefulness, or of dreams, as the Heaven of the Northman theology is beyond its Hell. . . . It is as if the five senses were supplanted by five myriad others alien to mortality. . . .

Now so entire is my faith in the *power of words*, that at times, I have believed it possible to embody even the evanescences of fancies such as I have attempted to describe. In experiments with this end in view, I have proceeded so far as, at first, to control (when the bodily and mental health are good) the existence of the condition:—that is to say, I can now (unless when ill) be sure that the condition will supervene if I wish it, at the point of time already described: of its supervention, until lately, I could never be certain even under the most favorable circumstances. . . .

I have proceeded so far, secondly, as to prevent the

lapse from *the point* of which I speak—the point of blending between wakefulness and sleep—as to prevent at will, I say, the lapse from this border-ground into the dominion of sleep. Not that I can *continue* the condition—not that I can render the point more than a point—but that I can startle myself from the point into wakefulness—and *thus transfer the point itself into the realm of Memory*—convey its impressions, or more properly their recollections, to a situation where (although still for a very brief period) I can survey them with the eye of analysis. For these reasons, that is to say, because I have been enabled to accomplish thus much—I do not altogether despair of embodying in words at least enough of the fancies in question to convey, to certain classes of intellect, a shadowy conception of their character.”

—From Poe's MARGINALIA.

It is a far cry from the rapture that Poe dwells in, to the bald statement that the physiological condition underlying such mental experience, as reported, may be distinctly correlated with states of relaxation. Yet, Poe, analyst, would have been the first to welcome a practical approach to the “psychal impressions” that he experienced. For scientific progress, we must “mesh in” an intellectual reverse-gear and recede from the “subjective” view-point that such ethereal sensations do represent a state of affairs *external* to one's organism. For, as Gurney said, when music seems to be yearning for unutterable things, it is really *we* who are yearning for the next note. (10). In this same way, might not Poe have made use of modern knowledge to reassure us that the kinesthetic repose need lose nothing of its rare quality, even though we may explain its most subtle and “psychal” manifestations as simply due to a delicate, labile state of vasomotor equipoise, fancifully apperceived in a state of rest. Such I believe it to be, and yet none the less interesting in relation to all that is essentially valuable in the biological state called ecstasy. For ecstasy is a congener of the rest instinct.

Edgar Allan Poe did not succeed in maintaining the condition that we have provisionally called Kinesthetic Repose beyond what he calls a “mere point of time.” In my experiments, however, under more technical conditions, the subjects with whom I collaborated succeeded in maintaining the state in question for hours at a time. From certain of these subjects, pulses and breathing curves were taken. These experiments indicated that the subjects developed, even under experimental measurement of this kind, all the essential features of Kinesthetic Repose. A particular subject from whom a kymographic tracing

was taken, had lain in one position without stirring for one hour and twenty-three minutes; during that time he remained fully conscious and was able to answer questions (as to his state of relaxation) with promptness and intelligence, using a push button system that recorded *yes* and *no* on the kymograph, with only infinitesimal effort of the subject's index finger. The point of this particular record is that it demonstrated that the ineffable condition, described by Poe, can be experimentally maintained and analyzed.

What seems to justify the parallel to the anesthetic revelation is the strangely manifested and altered inner mood: subjects report a "sense that time is no more," or of personal non-existence. In cases of protracted reverie, they report no consciousness of time or else a sense of infinite duration. Marked exaltations in the sense of well-being are described (euphoria).⁶

INSTANCES OF "PAN-SOMATIC" SENSIBILITY

An experimental case, studied in the laboratory of physiology at the College of Physicians and Surgeons, New York, afforded an interesting suggestion as to the origin of the sense of unearthly powers. When a set of tuning-forks was set going, the subject heard them with perfect understanding of their nature, but, nevertheless, reported as follows: "Do you know, I heard those tuning forks *everywhere in my body* more than in my ears!" This may be a pure illusion, or it may be a sort of pan-somatic sensibility dependent upon the delicate vasomotor equipoise. In any case, it shows the possible substrate of the illusion of grandeur. Another case had a wonderful sense of uplift from a Hudson Steam boat whistle that seemed to vibrate all over him, while he was lying down, relaxed to the point of lethargy.

There is much more to be said about this special sort of "pan-somatic sensibility." It is, indeed, such that those who have known it experimentally, can understand the words of Poe when he says: "It is as if the five senses were supplanted by five myriad others alien to mortality."

This sort of testimony crops out again and again in the utterance of mystics. Poe cannot be so accounted in this matter, for however appropriate his words might be to the description of the illusional condition in question, he was evidently presenting the matter in a spirit distinctly scientific.

⁶Let us not forget that time-sense and Kinesthesia are physiologically allied.

Strange as it may seem, the utmost familiarity with this physiological experience of Kinesthetic Repose and the most intensive analysis of it, do not take away its intrinsic merits, if we may so call them. It remains *sui generis*, with all the attributes that belong to a healthful, normal, and recuperative sleep state. But even when one has become fully sophisticated with regard to the experience, it may still, at any time, unexpectedly deceive the mind with certain illusional phenomena, among which the most prominent and likely to occur is the illusion of floating or levitation. This is the experimental fact that lifts the veil of mystery.

At first sight one would think that kinesthetic repose must belong only in a group of experiences related to the outgivings of long-locked mystics or hair-shirted ascetics. These vague outlines would seem incapable of being filled in with anything concrete, were it not that, in laboratory experiments, as just stated, subjects reported experiences that precisely fit into the frame that Poe has, with more than the ordinary power of perception, created.

Our data were gathered on the same basis of commonplaceness that might appertain to the reports of young men in training quarters (where "the bodily and mental health are good!") speaking to each other casually of their feelings of fitness. Any of such youths could (after instruction in this subject) recognize among his mates the unconsciously given signs of the Kinesthetic Repose. As, for instance, when he would see one awake delightedly and stretch himself on his cot; saying, "Gee! I feel as if I had been asleep a week." And the raised corners of the mouth, the laugh and the posture, and the refreshed bearing of the individual are more eloquent, and possess a more truly scientific import to the physiologist than any verbal expression.

The kinesthetic revelation is simply the acme of the kinesthetic repose, and, underlying it is an extremely restful condition, comparable in degree to the literally entrancing lethargy of anesthesia, such as is known to underlie the anesthetic revelation.

Passing now to the somewhat heterogenous collection of instances of levitation, semi-levitation, flying dreams, and all the concomitant sensations with which we have been concerned, in this and the previous papers, it should not be argued that because these various phenomena have striking points in common and form a connective series, that they are, in equal degree, assignable to the basic psycho-physiological condition here called kinesthetic repose. No such logic or argument



THE ANGRY SHEIK SCENE.

This is a clear case of the function that Hobbes called the Fiction of the mind.

Whether from a seventeenth or twentieth century point of view, we can equally well understand what has happened in this dream. The mind has compounded in a more or less complete resolution (as it were, in full response) all the cues operating upon the sensorium—cues which we have explained as typical of the processes and resulting sensations set up by the sympathetic nervous system, when stimulated by adrenin. Here, then, we can dispense with the idea of a strict "competition for the final common pathway"; and lay our emphasis on the resolute or compounding effects in the higher centers. This illustration is simply a more complex example of the "resolution of physiological states" (Jennings) which, in a previous paper, we illustrated by the case of a Japanese poetess, who was asked to combine several given cues into one word-picture. The cues were a triangle, a circle, and a square; and the Japanese poetess responded as follows: "Raising one corner of the mosquito netting, lo, I behold the moon."

is relied upon. In fact, the appeal here is not yet to logic but to the capacity for visualization. (11). What has been offered hitherto is not in the nature of experimental proof; it is intended by way of exposition. The subject is too new for anything but preparatory data.

To resume, Kinesthetic Repose is, then, only a certain aspect of the bodily condition favorable to "levitation." I am concerning myself with reports of certain experiences which, intelligently digested in conjunction with existing physiological knowledge, point to a definite physical state that underlies and provokes pseudo-levitation. My proposition is that this fancy may be traced to its bodily source through the sort of spontaneous experimentation that literally lies in wait, detective fashion, for the facts to bring their own evidence before the mind of the "relaxing" (not necessarily "sleeping") person. (12).

In such observations, the race is not always to the most scientific researcher; luck plays a part, as indeed it has played a large part in invention and discovery at all times. And I do not interpret the scientific ideals of my "experimental" confrères in psychology to imply that one should pass by, or affect to despise, data that have been offered by the "spontaneous experimentation" of Nature herself dealing with the individual.—Let me give an example:—

THE WHISKEY HAMLET DREAM

On a warm night, the dreamer slept with a minimum of clothing. It was in the Berkshire hills, where the nights are apt to turn cool even in hot weather. As everyone knows, cold breezes come down from the wooded hills through the steep valleys. Toward morning a dream occurred as follows: I was looking out of a window at a frosty landscape. There were steep wooded hills with a road winding through a narrow valley at the base. Miserable looking huts, stamped with poverty, formed a little hamlet at the roadside. At such a prospect my disgusted reflection was, "That is a place that would drive a man to drink," (the clear indication being that the misery of such a locality would make the pleasures of alcohol the only possible corrective). Presently I felt that some one had given me a drink of whiskey and the pleasant glow spread upon me from the comforting draught.

I waked and then the real situation burst on me.

There was a strong cold draft coming through the window (with its prospect of wooded hills) and even as I waked, I felt a cold shiver pass off, while the greater part

of the exposed body-surface was deliciously being warmed by the vasomotor dilatation.

Here we have many pungent elements of experience that were identified by this subject as having been felt often before, in previous relaxation experiments, without (I trust it may be believed) the artificial help of either cold drafts or of draughts of whiskey.

Obviously, the real common element was in the vasomotor dilatation.

The more fanciful elements of the dream can easily be accounted for as imaginative plays, understandable to anyone who has taken a dose of whiskey medicinally in cold weather, and has noted the circulatory effect and bodily exhilaration.—i. e., the vasomotor comfort.

This fancy is of the same type of construction as that of levitation.

Now I have come to insist on the vasomotor element in the illusion of levitation, although this illusion as such does not appear in the above dream! Nevertheless, we may say, *it was on the point of appearing* when the dreamer regained full consciousness. In support of this view, we must pass on to a neighboring case where the same sensory concomitants formed the antecedent of an unquestionable levitation dream. For, in spite of the present tendency to decry the logic of Intermediate Steps, no less severe an experimentalist than Professor Munsterberg justifies us by saying that the proper way to relate phenomena to each other is to show a gradation of cause and effect in the form of a series; and so, although knowing the danger of the abuse of such a method, I will adduce another and clearer instance.⁷ (13).

The so-called Angry Sheik Scene forms the connecting link. It was, in every sense, a dream *picture*—because the illusion of motion was not there. On the contrary, there was absolutely still life, in the sense that the representation of a caravan in the desert, being overtaken by an angry sheik on horseback, was seen as if drawn upon a wall, retaining definite marks of the artist's crayon.

The thing that lends vividness to this dream-testimony, as an illustration of the underlying conditions of the illusion of levitation, is that it was implicated in the imagery of the Warm Clothing dream, once before pictured—being the one hitherto omitted scene of this dream.

In the Warm Clothing dream, the insufficiently clad dreamer sees

the Angry Sheik picture on a wall as he runs by, in pursuit of Smith. Need I embarrass the present thread of thought by calling attention to the various sensations already vicariously represented in the picture. Let it suffice that, given the obvious fact of a dream of insufficient clothing as the antecedent of the Angry Sheik phantasy, and given the illusion of levitation in the consequent part, the Angry Sheik Scene should be interpolated as the key to the physiological state.

PSYCHO-PHYSICAL PARALLEL IN ANGRY SHEIK DREAM

Bertillonage: Haughty lady at left is *cold* in spite of the desert heat. The hooded saddle rests upon a blanket made in Germany (by Professor Doctor Jaeger) from camel's hair wool. The sand of the desert is prominent. The heated and irate gentleman at the right who shakes his fist at the lady and looks daggers, has come from afar to traverse the leisurely march of her caravan and, with malice aforethought, brings along his new wife—to spite the haughty lady, who once had been his affianced.

Reconstitution: The *cold* lady is a mental reflex from the *chill sensation* that initiated the dream. The Jaeger blanket is a relayed association from a previous dream-scene when the dreamer was pursuing warmly-clothed Smith. This is, in fact, a search for a comforter, mirrored in fancy. To this same series we may attribute the warm burnooses of the camel drivers, which recall Hosea and the frieze of the prophets. (Note that the design woven in the blanket was also a frieze.)⁸

But the misery of being cold engendered other reactions, both mental and physical: goose-flesh appears, and with it a mental mirage of sand in the desert. In fact, the whole scene is painted under the control of these several stimuli acting concurrently; we should scarcely guess at their existence, had not the other scenes of the dream given us more unalloyed reactions to the several physical conditions, in turn. For there is also the *incipient shiver* to be considered as part and parcel of a complex, but unified, reaction of the autonomic nervous system: goose-flesh, shivering, shaking, hair-rising, and lastly but not least the vasomotor dilatation.

These we can reasonably anticipate from the circumstances of the dreamer's chilliness, and we can look for their mental representations in the projected fancies of the dreamer. They are, in turn, "shaking" of the fist, anger on the part of the Sheik, the mad plunging of the horse, whose aspect is as heated as that of his rider (vasomotor warmth) But we are getting ahead of the story, for nothing has yet come to explain why the madly hurrying horse should

⁸Punning changes on the vowels *e* and *i* can be traced in the dream, i. e. sheik shake, frieze, freeze.

intervene among the calm camels. The answer is physiologically not complex; vasomotor dilation is a circulatory disturbance, and is often associated with another circulatory change, to wit, an alteration in the heart beat. This may be found, time and time again, in dreams where the heart is known to have been affected, whether on the physiological plane or on the emotional plane. Rapid vehicles or any rapid means of "exciting" transportation thereupon figure in the dreamer's phantasy. Already, it may be said that any rapid or shifting transportation (e. g. the Chancellor's dream in "Iolanthe" by Gilbert and Sullivan) is virtually diagnostic of circulatory disturbance.

Under these circumstances of circulatory disturbance, the next scene of the dream—the levitation scene—was born. Can their connexion be doubted? We refer to the Warm Clothing Dream, in which the dreamer levitates airily by and beyond the coat room. He has no use for warm clothing now: for THE VASOMOTOR ANTI-CHILL REACTION HAS ACCOMPLISHED ITS PURPOSE AND HAS THROWN ITSELF OVER THE PERSON AS SURELY AND AS WARMLY AS ANY OF THE LONGED FOR COMFORTERS.

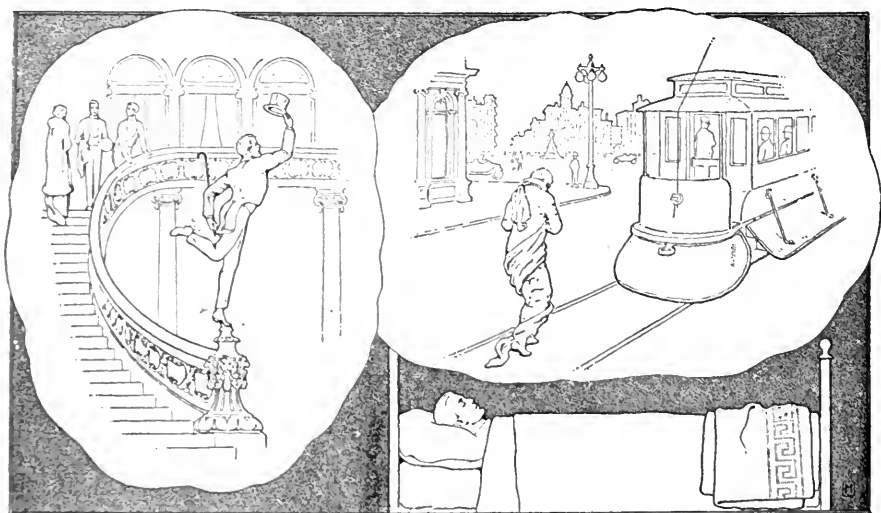
This is a somewhat broken and inadequate recapitulation of the natural phenomena underlying the dream and leading up to the levitation scenes. It is inadequate because Nature, in comparison, does things more smoothly; and we may well ask whether the exquisite blending of fancy by which the Angry Sheik picture becomes the mental response to numerous sensational cues, may not—still in nature's smooth course—be matched in the underlying physical mechanism. I mean to refer to what is back of the vasomotor changes that here certainly preceded—even if we still hesitate to say that they caused—the floating illusion.

These vasomotor changes do not stand alone. They are part of a physiological "show." In the Angry Sheik dream, we have threaded this way and that through the physical and the mental planes: *chill* reactions, *hot and cold* attitudes of characters, *shaking or shivering* members, *trembling* gestures of rage, *rapid* motion, and the solacing *exploit* of arousing jealousy in another.

Likewise, in the Whiskey Hamlet dream we have an exhibit of misery from cold, and mental reflections upon a cheap form of *exploit* or *solace* (being driven to drink).

THE UNIFYING CONCEPTION

In part, these mental reactions are assignable to cold as a sensory cue. For the rest, it is a verifiable prediction that in most such dreams the substratum is a chain of physiological responses as definite



A FLYING DREAM FRUSTRATED

By Subconscious Perceptions of Foot Situation

The dreamer had gone to sleep with a certain deliberate relaxation, neglecting, however, to remove the heavy camel's-hair robe pressing upon his feet. In the course of this sleep, Kinesthetic Repose was achieved; there came a sense of elation, elevation and levitation, reflected in the first scene as an exploit of "showing off" under the pose of a Flying Mercury, on the balustrade of the Opera House foyer. The "dream choice" (*Oniric* selection, technically speaking) of this pose is controlled by the continuing pressure-sense in the foot region, obviously derived from the kinesthetic sensations set-up by the robe in question. This promptly frustrates the illusion of levitation insofar as the dreamer's fancy cannot take wings like the Flying Mercury, but has to remain fixed to the pedestal. Moreover, the robe, as an impediment, becomes the controlling factor in the second scene; this shows the dreamer pursuing a lumbering electric car. Note that this car has some steps visible, but that its "running gear" is covered by heavy fenders. *Embarrassed locomotion* is thus reflected in three figurations, constituting a series of three apperceptions of the dreamer's foot-situation. Note that the robe in the dream was a Russian pony skin: an evidence of imperfect association with the familiar camel's hair (Jaeger) blanket, which the sleeper often draped around his shoulders on cold nights.

To understand the dream fully, observe the contrast between the upper and the lower part of the body; the lower being embarrassed, the upper free. Embarrassed running gear, etc., reflects the persisting kinesthetic sensations (pressure sense and joint sense.) The Flying Mercury attitude, however, reflects the freedom of the upper portion, due we may believe to the loss or diffusion of kinesthetic sensations; of which the controlling factors are explained in the text.

This dream calls attention to the fact, observed in laboratory experimentation with kinesthetic repose, that *greater freedom of the lungs* may crop out prominently in levitation dreams. (Subjects frequently wake in the night, recognizing the very changes in the general condition of heart, lungs and circulation that link up with the levitation illusion.) The heart condition is reflected in the *staircase*, the *running* and the *steps* of the street car. Now is there any reason to suppose that the expansion of the lungs figures here, as in other dreams that could be cited at length? Probably; we may say. For purposes of exposition, we can point to the likelihood that the "choice" (*Oniric* selection) of evening clothes is controlled by the sense of lung-caveament, owing to this sleeper's association of *evening clothes* with *freedom* of chest movements.

as if whiskey had been given to antidote the chill. These responses, individually, can be unified in relation to the concept of highly adapted or purposive reflexes: those of the adrenal-sympathetic mechanism.

Let us try to conceive of this unity as due to the nerve-action of a single fluid, as liberated in the circulation. And let us call this *adrenin*, for that is *par excellence* the substance that can be counted upon to put the autonomic (sympathetic) nervous system through all its paces. These we have glimpsed, as through a distorted glass, darkly, in the Warm Clothing and in the Angry Sheik dreams.

The essential thing to be noted is that adrenin is particularly associated in Nature with any violent action or exploit. Hence occurs the reciprocal or cyclical action in the dream whereby the exploit-idea is aroused when the characteristic functions of adrenin are automatically initiated in sleep. This explains the many "showing-off" features of such dreams.

We can carry the conception of adrenin or adrenal action to a useful conclusion in this case if we understand that adrenin produces gooseflesh, shivering, pallor (as in chill), a sense of warmth and the shaking of the muscles. The shaking of the fist in a dream may, therefore, be—and undoubtedly it was in the Angry Sheik dream—a mental apperception of shivering, conceivably founded upon a stimulation of the sympathetic nervous system by adrenin, or exactly as if by adrenin. The vasomotor dilation, following later, after adrenin had been at the height of its constrictor effect, must also come in for consideration by us: it does receive consideration from the dreamer in the shape of the consequent illusion of levitation, which is to be explained as mainly a reaction to the changes of the sensorium produced by the grateful, diffused "blood-vessel sensations." Hence, the play upon the idea of solace or comfort.

To emphasize the aspect of this secondary adrenal action which leads us to the physiological conception of the levitation illusion, we should further consider another dream, in which there is a definite illusion of levitation and many associated earmarks that place it in close touch with the other dreams here cited. It has already been presented in a general way in a previous paper. It is the Disturber of Traffic Dream, as illustrated on page 148.

THE CIRCULATION AS VEHICULAR TRAFFIC

Here the landscape is far from being a sandy desert: apparently goose-flesh did not figure in the phantasy. The rapid transportation

is there, and there is an irate policeman, shaking his club at the puffed-out dreamer in passive levitation. The sinuositities of the parkway are, obviously enough, reflections of the blood-vessel pulsations, just as the vehicles are of the heart beat. Moreover, this dream is distinguishable by a somewhat rare type of illusion based on kinesthetic sensations in the foot region, transposed phantasmagorically into the field of the hand, and belonging to the class of stereognostic judgments. Indeed, this is a convenient occasion to say that the levitation illusion might be called "a-stereognosis," an inability to form correct perceptions and apperceptions of objects in their spatial relations. This is mediated by the deep sensibility or kinesthesia.

This disturbance of perception is due, not merely to the dropping out of familiar kinesthetic sensations that guide judgment even in sleep, but to the overlay of other sensations, such as those of vaso-motor changes, affecting the pressure-sense discrimination.

But these overlays are themselves referable to the action of the peculiar secretion of the adrenal glands, acting forcibly through the sympathetic nervous system, as stated.

As adrenal action is common and constant enough in all of us, especially when we get, as we say, "hot under the collar" (like the Angry Sheik and the Irate Policeman), why is it that we do not more often have these interesting illusions and their accompanying phantasies? The reason is that we are seldom quite in the condition to observe their undiluted operation, as the dreamers were, under the conditions related. For it is an enabling condition of levitation and such-like dreams that the adrenal-sympathetic action should present its results to us during just the right stage of observation. The Kinesthetic Repose fulfills this condition; and it is, in turn, characteristically associated with the mid-state of attention, or the *somnium*, the natural transition from sleeping to waking. These states, especially if perfected to the point approximating the Kinesthetic Revelation, yield that "silence of sense" in which normally unperceived things stand out loudly. Then the way is made open for the fanciful apperceptions that create those subtle appearances of something "alien to mortality," and all those more positive illusions like the Flying Dream or the Levitation Sense, which—however alien to mortality—are still "the visions of healthful sleep and at a good distance from the grave."

SUMMARY

The mental aspects, however trivial, of the illusion of levitation as it may occur in sleep or even outside of sleep, are taken up in detail. These features are listed after the fashion of Bertillonage, as a sort of "detective" investigation. This is a hark-back to the method preconized originally by Aristotle:—the object is to use the fanciful ideas supplied by the mental aspect, as a means of trailing the phenomena (levitation dream or illusion) back to corresponding physiological mechanisms operating within the subject himself.

A significant fact comes in for attention: the illusion of levitation is encountered in conjunction with the Dream of Falling on the one hand, and on the other, with the Dream of Insufficient Clothing. It is intimated that all three may have something in common—as to their physiological provocation. The search for an experimental demonstration is described.

Next, consideration is given to the psycho-physical condition that accompanies the kind of sleep wherein the illusion of levitation is most commonly experienced.

To form a chain of evidences, the characteristic mental stigmata of levitation are described, beginning with a therapeutic experience in trance reported by Professor Munsterberg, passing to Edgar Allan Poe's experiences with "psychal fancies" (here called kinesthetic revelation) and continuing with experimental observations of sporadic dreams, and relaxation tests from the laboratory. The mechanism underlying the Flying Dream and the levitation illusion is attributed, mainly, to the functions of the adrenal-sympathetic nervous system. These functions, while appearing as the basis for the idle illusion here in question, are considered to be purposive quite as often as fortuitous: i. e. they are oriented toward the prevention of (a) chill (b) asphyxia (c) fatigue.

The broncho-dilator functions of adrenin are invoked to explain the respiratory phenomena involved in the levitation illusion (legend under picture).

What little remains of the sexual interpretation of such dreams, we may leave for the disciples of Freud to gather.

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THE MORAL CONFLICT AND THE RELATION OF THE PSYCHOLOGICAL TYPES TO THE FUNCTIONAL NEUROSES¹

BY BEATRICE M. HINCKLE, M. D.

WHEN Dr. Jung, of Zurich, and those of the psycho-analytic school in general, embodied the results of their investigations upon the neuroses in the statement that a psychic conflict is the cause of every neurosis—although every conflict does not produce a neurosis—a definite bridge was built connecting the physical organism and the disturbances due primarily to the flesh, with the so-called psychical realm—the realm of the soul.

It is only a few years ago that when anyone spoke of a moral conflict, the mind instantly reverted to some theological matter—a subject for the priest but certainly not for the physician. This is not surprising when we remember that the whole advance of medicine has been a steady pre-emption of the realms of mysticism and magic—a dragging of the occult into the daylight of the laboratory and operating room. Historically, it is not so long ago when all healing was a magic art, not a science, and when all therapy was in the hands of medicine men, priests, oracles and old women. The invasion of science into this field was a bold and daring task, the innovators, the experimenters, like Galileo, were considered sacrilegious, and so strongly was the church intrenched that science until our day contented itself with the body and considered that the soul must be left to religion. This split is a result of that ancient dualism which divided man into two parts, the material and the spiritual. Science must not meddle with the spiritual, its realm was the physical organism.

Today, however, we know that the human being cannot be halved in this simple and superstitious fashion. He is a complex aggregate—a psycho-physical unit—and to gain a real understanding of the human being science must deal with the entire man.

Indeed, it has been the advance of science itself which necessitated this enlargement of the field of the physician, for through the growth of science the religious beliefs and the practices of magic have been largely disintegrated. A deep human need was thus left without any

¹Read before the Canadian Medical Association at Hamilton, Ont., May 31, 1918.

adequate means of help, and there sprang up divers kinds of pseudo-religious-scientific attempts to meet it. The existence of Christian Science, New Thought, and allied cults all basing their claim for practical recognition on their ability to cure disease, are convincing proof of the widespread need of humanity.

There has been and still is so much confusion among the regular psychologists themselves as to the respective claims of subjective and objective phenomena and the modes of inquiry and study and the physiological interpretation of the mental states, that when a rank outsider like Freudian psychology, taking no account of either the regular school psychologists or the physiologists, intrudes itself into this confusion it is natural that it should be regarded as a common enemy and be attacked by both parties.

Pursuing a purely psychological path for a definite end, the understanding of the significance of human behavior for therapeutic purposes, psycho-analysis has no quarrel or dispute with physiological psychology. "Mental and physical activity are two inseparable aspects of a definite series of events and for a complete understanding of the organism need to be studied equally."

Dearborn makes the definite statement that "experimental physiology and even one's own personal experience prove that the nutritional and sympathetic influences from viscera affect the general sense of well being markedly and there seems little doubt that the different autonomic nerve-currents play a considerable part in the origin of moods and passions—indeed with all the basic affective themes that underlie consciousness and behavior;" but this does not preclude the psycho-analytic concept that impulses and instincts in conflict with ethical ideals produce symptoms and interferences with adequate adaptation to the demands of life.

Sherrington and Cannon, however, do not claim a priority for the visceral influences. Indeed, the former states that "we are forced back towards the likelihood that the visceral expression of emotion is secondary to the cerebral action occurring with the psychical state."

Dr. Cannon has directed much effort toward an attempt to differentiate emotions on the basis of their visceral components, but only gives a negative answer so far because in his experiments he found the viscera "implicated in ways which are similar even when the emotions provoked are presumably quite divergent."

The chief question at issue seems to be, stated in general terms, whether there is an independent psychic state which precedes its physio-

logical expression. The burden of determination would seem to lie upon those who take a negative position, for those who attribute a large part to the ideational element in the production of feeling and emotion and thus to behavior, have much work in this realm alone and certainly a large contribution for the immediate benefit of the individual.

Mind can be called a complex function, the dominant of the human organism, effected equally by physical processes alone and by ideational stimuli. Freudian psychology deals entirely with the ideational aspect, the effect of ideas and concepts upon the instinctive and primitive desires of the organism and has no wish to dispute or deny the effect of physiological processes upon the psyche.

The real aim of man is to gain satisfaction for his ego on the one hand and for his love instinct on the other, and it is the thwarting or non-fulfilment of these desires, in constant conflict with his environment and his moral development, that is the cause of a large portion of his sickness and misery.

The conception of the moral conflict in man or the "struggle against temptation," as religion expresses it, is as old as man's thought and to state its existence expresses nothing new. But to discover, and stand ready to prove both empirically and theoretically, that certain disorders of the human organism are but products of this conflict within the personality, the visible and outward manifestation of the struggle within, and lifted out of the religious and mystical setting can be understood and dealt with by a definite psychologic procedure as surely as we can deal with organic disease, is an achievement worthy of the utmost consideration. Thus finally through the efforts of the physician Sigmund Freud and his followers, the science of medicine takes once and for all into its scope the entire human organism.

In view of the great literature dealing with Freudian psychology, it is quite unnecessary to do more than make the brief references to Freud's conception which the development of my theme demands. There is also accessible for study and comparison a quite complete exposition in English of the work of his former pupils Adler and Jung, who are now both working independently.

The great contribution of Freud is the technic of psycho-analysis; contained within this technic are the theories of repression and resistance, the transference mechanism, the infantile sexuality and the interpretation of dreams as a direct approach into the Unconscious wherein lies the real origin of the conflict. This work of Freud led

him into his conception of the sexual etiology of the neurosis, for while he states that he does not ignore the fact that the ego also has claims, still his entire emphasis is placed on the sexual irregularities or inhibitions which are invariably found in every case. As is well known, the great opposition to Freud's theories was caused by this sexual conception and by his symbolic dream interpretation which was subjected to the criticism of being arbitrary and forced. But it must be remembered that Freud did not give these symbols to dreams arbitrarily, but worked them out from the free association of the dreamer in connection with folk symbology universally expressed in religions and myths.

Alfred Adler, one of Freud's original pupils, was the first secessionist from the teachings of his master. Freud's theory made the sexual strivings the central motif of the life and their non-fulfilment the cause of all the neuroses. He has no special interest in the strivings of the ego stating that psycho-analysis had a greater interest in showing that all ego strivings are admixed with libidinous feeling components. Adler's theory on the contrary emphasizes the other side, namely, that all libidinous feeling contains an admixture of egotism, and then places the emphasis in favor of the ego component instead of the sexual. Thus, although Adler concedes that the psychological conflict is the basis of the neurosis and uses the same technic including dream analysis, uncovering the same material, he makes a different interpretation, claiming that the assertion of the ego is the major factor.

The Adlerian central theme is the "will-to-power" in the form of the "masculine protest" which manifests itself domineeringly in the conduct of life, in character formation, and in the neuroses. He has attempted to work out his theory on the hypothesis of the weakness or physical inferiority of certain organs of the body which the organism in toto is making a continuous effort to over-compensate both through physical and psychic mechanism—the sense of psychic inferiority caused by this is being continuously opposed by a definite struggle for superiority. This striving for superiority which Adler sees as the main motive for the life as well as for the neuroses he calls the "will-to-power," deriving the term from Nietzsche whose whole philosophy is based on the theory that the major motivation of life lies in the desire or instinct for power. Man desires to be a superman: in that lies the secret of all his painful effort, his arduous adaptation, his progress from the animal up.

Carl Jung of Zurich, also one of the early pupils of Freud, made his first open defection in 1912 when he took exception to Freud's wholly sexual theory and introduced some modifications in the same. Unlike Adler he does not throw out the sexual or love motif, but sees it as one of the important factors in the etiology of the neuroses, which must be given its place, but does not consider it the exclusive cause of the conflicts of life.

The development of his libido theory in which he gives an entirely different meaning to the concept than does Freud is the attempt to express his empirical findings theoretically. Instead of using libido to mean merely sexual hunger or strivings, he conceives this libido as a hypothetical energy of life analogous to the conception of energy in physics and which can be studied only through its manifestations, but cannot be described. It first appears in the act of suckling and nutrition and is occupied in the growth of the child and in the development of its various functions which are successively awakened,—one of these being the sexual function. In the beginning it is largely undifferentiated but later becomes differentiated. It is the proper and normal application of this libido either instinctively achieved or consciously acquired through psychoanalytic education that constitutes a healthy psychical state. Besides this, although the fact of infantile sexuality is accepted, instead of this factor being the cause per se of all the neuroses, Jung sees this infantile sexuality itself as one of the symptoms of the immature and only partially developed personality. In other words, the development of man's personality is looked upon as being due to factors other than the sole one of his sexual organism, although this plays a large part, much larger than is generally supposed.

Perhaps Dr. Jung's most important contribution for the understanding of human personality, however, is the differentiation and study of the psychologic types. The advantage of the classification of mankind into distinct psychologic types whose reactions to stimuli are different and distinct and can fairly adequately be postulated in advance is as valuable for the medical psychologist as is Dr. Joel Goldthwaite's anatomical and physiological classification for the internist.

To be sure, William James referred to two distinct mental types when he spoke of the tough-minded and tender-minded persons, and the age-old disputes between various schools of romanticists and classicists all dealt with the same problem, but until the present time

the importance of thoroughly recognizing these types and their distinctive reactions has never been properly understood, for in no other way as yet devised can any real understanding of human personality be gained.

Jung deals for the time being with the two very distinct and definite types which are most easily recognized and are everywhere in evidence, and these he calls the extraverted and the introverted. He does not deny that there are probably other types not yet clearly defined, and from my own rather large experience I am inclined to believe that these are only variations of these two main types. These can be conceived of as being at opposite poles—and between them the less pronounced individuals who lean, however, definitely on the one or the other side, until the middle is reached, when the mixed types appear. These types partake of the nature of both introvert and extravert, those having the accent on the introverted mechanism being called by me Emotional Introverts and generally including the essential neurotics and unstable individuals as well as the most gifted—artists generally belonging in this group. Those with the accent on the feeling function I term Intellectual Extraverts and these include the best adapted and most stable individuals.

The two main types are characterized by absolutely opposite reactions and are in marked contrast to each other. The one called by Jung extravert is chiefly recognized by his responding to stimuli with feeling and action. He feels his way as it were into the situation and identifies himself with the object so that the ego and the object become one. This is the so-called "man of action." His thought function is ordinarily less developed and is inferior to his feeling which is frequently so finely differentiated as to enable him to handle difficult situations and meet practical problems of life in a highly successful way and this often passes for intellectual acumen. He is frequently referred to as the person who acts first and thinks afterwards.

Exactly contrary is the reaction of the introvert. He reacts to stimuli by thinking and tends to withdraw from the object to think it over and weigh matters. For him action is difficult, uncertain, and delayed. He cannot make an immediate and direct contact with the object because between his feeling and the object is the ego. An extreme example of this type is Hamlet "all sicklied o'er with the pale cast of thought." He broods, meditates and is often moody.

If the introvert has had an intellectual training and development he substitutes for his difficulty in action and quick adjustment to the

changing conditions of life, the creation of theories, philosophies and logical reasoning about things and seeks to adapt himself mentally—his trouble comes in putting these ideas into practical application. This does not mean that he is without feeling. Indeed, he may have the strongest feelings—one class of introvert is often called the emotional type—but his feeling is undifferentiated and he reveals an inadequate emotional reaction and valuation. His emotions when aroused frequently show an undeveloped character, so that it is not surprising to find highly cultivated introverts acting in a childish and infantile manner when their feelings are touched, with deep moods of depression and a tendency towards infantile sexual manifestations.

The introvert is also affected by a feeling of inferiority which is often so unbearable that there is developed a mechanism which is constantly striving to overcome this by an over-accentuation of the ego—the power system—Adler's masculine protest.

The extravert, however, has not these same difficulties. Our modern world, with its accent on action and results, was made for him. He responds to stimuli, to people and events, with finely differentiated feeling and is more or less at home in the tumult and struggle of the world. He is pre-eminently the natural fighting man. His difficulty, however, lies in his thinking—when this is required of him instead of action, it is disclosed as of an undeveloped character—conventional and collective in type.

There are two individuals prominent in American public life who represent these types most perfectly and they may serve to make this subject clearer. These are President Wilson and ex-President Roosevelt. Roosevelt is obviously the extravert of rather an extreme type—highly successful in action with responsive feelings and a keen sense of events and situations—a man who can pick men—a man who makes warm friends and strong enemies, and who sways people by his emotional appeal. However, if his thought is examined, it will be found to follow action rather than precede it. It is conventional and lacking in originality, is usually made over from the ideas and thoughts of others, and he can quickly reverse himself when the occasion demands. President Wilson on the other hand is an introvert. He is a student and thinker, slow to action, with a policy called watchful waiting; that is, of thinking well over a matter before acting—of trying to understand all the causes and processes of problems. He can construct a political philosophy, or build up a religious international vision of the world. He refers to himself as having a single track mind, mean-

ing that having once thought out a path of action he must unswervingly follow it no matter what new situation may arise demanding a reversal or quick adaptation. His weakness lies in the realm of feeling and action. He has often, it would seem, been mistaken in his judgment of men, and in the field of action his retardation has frequently brought forth criticism from his most ardent admirers.

In another way, one may say briefly that the extravert puts the accent on the object and the introvert on the ego or subject. The extravert feels out and acts. He is the opportunist, feeling his way and acting according to the demand of the moment. The introvert thinks in and about as it were, able to act effectively only after a fully worked out line of procedure in which the subject is first and the object second. This is the reason that it is so much more difficult to treat the neurosis in the introvert than the extravert. He attaches himself to the object in order to assist and enhance the ego or subject and can only with great difficulty relinquish his hold once made, instead of adapting himself to the object with the ability quickly to change and make a new identification when the need arises.

It is in dealing with the neuroses of the introvert that one realizes the very great part played by the ego-dominant, the "will-to-power," and that recognition must be given to this component in any adequate analytic therapy.

It is through this recognition of types that Jung was enabled to reconcile the very opposite conceptions of Freud and Adler. Freud's sexual theory applies more particularly to the extravert and Adler's power theory to the introvert. To be sure this in no wise means that sexuality is not everywhere to be found and must adequately be met, but simply that the emphasis in one type is on the ego and in the other on the sexual.

The introvert can far more successfully repress his sexuality and be freer of its claims in consciousness than the extravert and instead of struggling with the sexual problem as the central theme, his struggle is with the feeling of inferiority, which is an almost constant accompaniment of this type, and with his over sensitiveness, which is concomitant with the intense ego demand. The important factor in the recognition of these psychological types is to realize that they can never under normal conditions be changed to the opposite types any more than can the physiological types be altered. Therefore, admonitions and advice to do or be otherwise is futile and this explains why in the psycho-neuroses a given line of treatment is successful with one patient

and fails utterly with another. The individuals are unable to respond except according to their own mechanism.

It is therefore most necessary that in the reductive process of analytic treatment an important place be given to the ego strivings as well as to the sexual components of the personality and that the formula or psychic mechanism of the individual be thoroughly grasped. For there is a very definite unconscious mechanism governing the type of reaction and behavior of the individual and to make this conscious is the first step in aiding him to find a more satisfactory mode than the primitive and instinctive one which governs him.

The moral conflict which so frequently lies beneath the neuroses, to be understood and met adequately, must be considered in relation to the type of individual and his particular mechanisms, for in no other way can his personal problem be satisfactorily solved. I shall attempt to elucidate this statement by citing two cases suffering from similar symptoms but presenting a very different history and mechanism.

Both came under observation because of what is called a nervous breakdown. The usual aggregation of symptoms is well known—fatigue, loss of weight and appetite, inability to concentrate on ordinary duties, insomnia, gastric disturbances, tremor, depression, loss of self-confidence, marked emotionalism and a general sense of weakness and failure. Both patients had been treated along physiological lines and sent away to recuperate for several months. Both returned complaining that they were not improved and presented themselves for analytic treatment.

Following is the history of Mr. B.:

Mr. B.

Age—34.

Analytic Chemist.

Married ten years.

Three children, all healthy.

Referred by a New York neurologist, who had been treating him for several months.

Commenced treatment March 29, 1916.

Patient complains of inefficiency to a marked degree; lack of confidence in self; inability to make good in his work; sense of fear and impending doom constantly over him so that he is unable to work properly or handle any matters in his profession that require responsibility and judgment. Can do better if he is directed by someone else which lessens his own responsibility.

This condition in a mild form has been present practically all his life; but during the past year he had a severe increase of all symptoms and what he calls "a nervous breakdown." This was induced by the assumption of new relations

and business environment and the forming of a partnership with new people which, while it much bettered his previous situation, was attended with responsibilities of a more difficult character. Almost immediately he commenced to doubt his own ability and feel that he was inadequate to what he was attempting, that his partners were dissatisfied with him, and that he could not make good; that it would be only a question of time when it would be necessary for him to give it all up, and that would be the end of himself professionally. He explains that he sits before a book, or case to be studied, feeling himself petrified, inert. He is constantly depressed and gloomy, has marked gastric disturbances, and feels unable actively to meet life.

Past History: As a boy, patient was his mother's favorite; had one sister, four years younger, and one four years older. Father absent from home much of the time. Remembers at a very early age (three or four years old) the feeling of fear, jealousy and dislike towards the father. On his frequent visits home he was jealous of being put away from the mother with whom he usually slept while the father was absent.

Remembers his shyness and great diffidence as a small child. Found it difficult to meet and mingle with other children of his own age. Had a violent temper during which time his desire was to smash things generally. Went to school and was quite bright. Learned rapidly and easily stood at the head of his classes. When about ten years old moved to new environment and new school. His recollections here are very unhappy because of the hazing and rough treatment of the other boys, to which it was difficult for him to adapt. However, after a time he managed better and later went to a public school, where a different class of boys, rather beneath him socially and of simpler lives, attended. Here he was able to get on very well and enter into the games and relations with all the other boys in quite a normal way. His work went on well and at sixteen he was ready for college. He always found much difficulty when his family desired him to associate with wealthy boys or boys of a social class equal to his own. There he was uncomfortable and unhappy.

Sexually he had practically no knowledge and no experience and cannot remember very much regarding this subject. Thought very little about things in general and did very little speculation. He had a slight experience with another little boy of his own age when he was about seven, which made very little impression upon him. Commenced to masturbate about twelve years of age. Found this out for himself. Never discussed the subject but once with another boy in an indirect way which was the first intimation that he had that any other boy could be as "bad" as he or do what he did. This conduct was entirely solitary, he spoke to no one, and he appears to have had no intercourse with other boys on sexual matters whatsoever. Had no idea regarding the relation of the sexes or birth until after sixteen years of age, perhaps older. Then things just gradually came piecemeal to him. First leaving of home when he went to college—between sixteen and seventeen. Here he had a very difficult time. Was very unhappy, unable to adjust to the boys, and felt himself entirely alone. Was always able to get on with girls very much better than boys, and from the age of fourteen always had some girl companion, although in none of these affairs was there any sexual activity. He seems to have been singularly unthinking and unquestioning with very little knowledge or contact intimately with other boys, or any understanding of what went on in the minds of others. His father affected him only as a superior person who was in control of him and whom he had to obey. His love was given to his mother. Neither parent ever talked to him about any intimate matters at any time that he remembers.

His marriage occurred at 24 years, and the initiative was taken by the wife, who planned and carried through the entire affair. He was passively happy in the beginning of the engagement but as the time for marriage approached he became increasingly anxious and panic-stricken, his anguish at last resulting in a confession to his fiancé of his own unworthiness and sinfulness because of his habit of masturbation which he felt was the cause of all his weakness and inferiority. This confession while it relieved him somewhat, in that now he had no secret burden of guilt to carry, did not in any way make the prospect of the new adaptation and its responsibilities any easier to accept and it was only because of the girl's confident and capable personality that the marriage was carried through.

As might have been expected from the previous history, his sexual life was inadequate and unsatisfactory and gradually through the years the domestic situation became increasingly difficult. Whenever any new responsibility arose or new adaptation was required he invariably reacted in the same inadequate and painful way as previously, usually talking suicide as the only way out for him. He was painfully conscious of his weakness and cowardice as he called it, but was powerless to remedy it. As a consequence of the unsatisfied love life of his wife, and the continuous strain of the entire responsibility of the home, children and husband, the wife became irritable and disgusted and a separation lasting a year and a half occurred. This partial freedom for the wife helped her regain her poise and they resumed their married relations. The husband was not in the least improved by this separation, however, and in a few months the same situation was present as before. This continued until about three years before he came under my care, when the wife suffered a nervous breakdown of a rather severe character and had again to leave home. This was the situation with alternating periods of improvement and relapse until the present complete collapse occurred nine months previously as related.

During practically the entire period of his marriage he had been under the care of various specialists for the numerous symptoms from which he suffered and for which he was trying to find relief in physiological therapy.

His own statement of himself reads thus:

"My mental or physical general characteristics are timidity, sense of inferiority, lack of self-confidence, and mental deadlock, by which I mean this: when I am confronted with a piece of work requiring initiative and resolution I feel unable to concentrate and get into the problem at all. There seems to be a perfect insulation between my mind and the job. I feel like an invalid watching life go by and under a compelling necessity of joining in it and yet unable to stir. The result is quickly a feeling of impotence in which I fumble helplessly with the problem, while time passes. I feel despicable, lazy, and yet unable to wake up and brush aside the simplest obstacles. Trying to work in this way I miss the most obvious considerations. There grows during this period of deadlock a most painful feeling of despair and loneliness often suggesting thoughts of suicide as a means of escape from the mental pain and from the contempt of others which must result from not doing the job. This leads to a most acute self-consciousness, to thinking that other people are talking about me, that office boys and stenographers are disdainful, that partners are disgusted, friends disappointed, etc.

"So if I have to discuss scientific points with others, because of the obstacles between my mind and the object (or inability to keep the attention fixed on the object) I lose the thread soon and then get a sinking feeling of dread and dismay

so that my thoughts do not reach the object or come freely; they seem to be my ego—an absorption in myself and what is going to happen to me. In fact I find it impossible to give attention to the job or the discussion because of the feeling that something is impending—an apprehension as to myself that shoves away any other interest. If I get some little job without much responsibility, especially if it involves physical action and shows some result immediately, I have a feeling of delicious liberation. This condition is very acute with respect to my professional work; I have this feeling of dread and dismay to a considerable extent on waking up in the morning."

In this picture we will immediately recognize the introverted mechanism and also see the condition spoken of so commonly as a break down from overwork, or an attempt to handle a proposition too large for one, etc. That this is true only because the major part of the energy (libido) was repressed and occupied in his psychic conflict, thus leaving only a minor portion to be applied constructively, I shall endeavor to show.

This man's whole life was spent under the shadow of the dominating personality of the father and from every situation in which it is incumbent upon him to act, responsibly, and adult, he recoils and acts the part of inferior child. He cannot put himself on a plane of equality with the father and all things which demand an adult attitude or aggressive handling are identified with the father. His partners before whom he shrank and whom he imagined were critical and dissatisfied with him, were really only surrogates for the father. He remains fixed in this childish bond to the mother and this inability adequately to manage the demands upon him produced a great conflict between the unconscious childish attitude and the conscious ego. He often expressed his feeling as similar to that of a man in chains struggling futilely and wildly to free himself and falling down exhausted.

The father in the patient's childhood stood for stern reality, a symbol of what he himself must attain, a dominating power who would separate him from the mother to whom he must cling fast, and therefore an enemy whom he feared and hated. This is called the incest problem by Freud, but Jung sees this condition of infantile continuity with the mother, the primary union which has never fully been dissolved into subject and object, as the actual cause of the inability to meet life adequately and as the cause of the repression and inhibition of the sexual impulse. Instead of the regressive longing backward, which renders adaption so difficult, being the objective incestuous desire for the mother it is the longing for the state of infancy when the

child was enfolded, protected and loved and had no necessity for activity on his part to obtain his satisfactions. This is the condition which the neurotic introvert can never completely renounce and in the case just presented the entire life reveals the wish to remain in the passive state. When confronted with the necessity of new adaptation or responsibility there was repeated the same mechanism of revolt, resistance, and paralysis as overcame the child in the presence of his father. All introverts have in common the feeling of inferiority, certain feminine or masculine characteristics, inverted according to the sex, auto-erotism, latent homo-sexual tendencies, frequently unconscious, and a marked desire to be loved as the child, or its opposite, to give love as a parent and at the same time exercise power and authority.

These latter attitudes are frequently combined in the same person who then alternates continuously between the child or inferior and parent or superior roles, and whose life is a constant struggle and revolt against the inferior child attitude, with the replacement of this by the superior, egotistic attitude. This soon breaks down and the childish attitude reappears only to be again overcome, and this mechanism is the affective influence dominating the life. My patients often describe the feeling in homely language, as a painful sense of being under, with a strong desire to be over or on top. It is this feeling that Adler designates the masculine protest, or will-to-power and to account for which he offers the theory of organ inferiority. All that is possible to say about this attempted physiological explanation of the phenomenon of inferiority is that the evidence presented is far from conclusive and no further corroboration has been offered. Jung moving wholly in the realm of psychology postulates the condition as the persistence of a psychic continuity of the child with the mother, the primary object to which the child is actually attached physiologically through the umbilical cord as well as through his complete physical dependence upon the mother during the early years. This primary attachment is never severed psychically and the persistence of the infantile attitude creates a feeling of inferiority. In other words the original set of the organism creates a pattern which is never relinquished by the individual in his later adjustments.

In great contrast to this case of an introvert is the case of Mrs. C., an extravert. This lady, aged forty years, was a most capable personality. She had successfully managed a large enterprise, had supported and cared for two children, and had well adapted to the

demands and responsibilities of life. Yet she now presents the same group of symptoms as the first case, with the exception that these feelings of inadequacy and helplessness are all new and unfamiliar phenomena with which the individual had no previous acquaintance, whereas in the first case the symptom complex was but an exaggeration of that which had been more or less in evidence during the entire life. One case presents that of the actual neurotic and the other that of the acquired neurosis. The history reveals the following:

Mrs. C.

Age—40.

Twice married.

Three children, one dead.

First husband died after seven years of rather unhappy marriage, before which time a partial separation occurred, because of the husband's ungovernable temper. She adds that she ceased to love him after a few years because his ideals and standards were much different than those in which she had been trained.

After this she went back to her father's house taking her children and soon learned to put her energies to work and forget her unhappy marriage.

Past History. As a child patient was bright and happy, full of ambition. Never had any illness. Was one of six children, all of whom are living and well. Father and mother both alive and well. She speaks somewhat enthusiastically about the father being a superior man, intellectually very able, and whom she admired very much. Her mother she refers to as a much lesser person. Questioned as to whether she was her father's favorite, she rather unwillingly states that this had been her great ambition as a child. That she had spent endless effort in trying to please him, to attract his attention to her, to adapt herself to his tastes as she imagined them, but he really treated her unkindly, hardly ever giving her even the ordinary meed of praise when she excelled in her school tasks or performed some particularly considerate act or effort to please him. In this discussion she showed considerable emotion, wept as she spoke of the father, and his unkindnesses to her, and in considerable detail told of the misery the entire family had suffered through him, how her mother had supported them all and the father had lived in idleness, exercising a domination over them by virtue of his bad temper, self-important attitude and superior manner. After relating many incidents which revealed the father as an overbearing lazy egoist, a very inferior character of the introverted type, I asked the lady how she could reconcile these attitudes and characteristics with her statement made in the beginning, that her father was a remarkable and superior person. She was much disturbed at this question and admitted that she couldn't understand it herself, that she was very unhappy over it, and had spent much time puzzling over these contradictory ideas.

The father became increasingly difficult and finally he was made to leave home and the family under pretext of his health, and live in a distant state.

When the patient was sixteen years old, she met a man much older than herself who seemed to her quite superior, evidently an introvert, and who from the description she gave seemed to possess many of the characteristics she mentioned as belonging to her father. This man she adored, and although he only gave

her scant consideration, that was enough to hold her devotion for six years, when he finally married her. She had three children within five years but the births were normal and nothing special marked her physical life. This marriage was not a great success on account of her husband losing caste in her eyes through his various weaknesses, and the gradual change of her love to active antagonism, which finally ended with his death as a happy solution.

She remained a widow for five years when she again married, this time a man slightly younger than herself—also an introverted personality, although this time of a very quiet, unemotional and passive type. She had known this man for several years; he had been devoted to her since her husband's death, and the marriage was a "natural thing."

However, in a very few months, she realized that there was something wrong here. He was exaggeratedly sensitive, would pass into moods of depression over apparent nothings, was not able to show her any warmth of affection and seemed afraid of any show of feeling on her part. As can be anticipated, he was not very virile and was sexually unsatisfactory. All this reacted upon her, causing her to throw herself into her work more intensely because there she could forget her great disappointment over this second marital failure and cease to criticize herself for the mess, as she called it, of her life.

Two years previously, she had what was called a partial nervous prostration, but was helped by changed environment and the usual tonic treatment. The condition of her life remained the same, however, and she had gained no insight into the dominant power affecting her; therefore two years later she suffered a very serious collapse, and it was this breakdown that brought her under my care.

This history at once reveals to those familiar with the Freudian psychology the typical Electra or so-called Father Complex and is the kind of case which forced Freud to develop his sexual theory of the neuroses.

This lady was not a neurotic personality, but a mature, capable person in her dealings with the outer world and she was able to postpone the development of her neurosis many years because she was able to lose herself in the object occupying her, and by her energetic activities forget the personal needs. She gained ego satisfaction through her achievements and business success, and it was the only too intense application of libido to this object and her unsatisfied libido sexualis which precipitated the breakdown. The fixation on the father in this case was so strong that she had never been able to relinquish her longing for him and desire to win him. To this end it was found that many characteristics and traits which she exhibited and which seemed incongruous with her type of personality were only assumed, taken over from her father in her efforts from childhood to please him. Her great efforts for success really had the motive of forcing her father to be proud of her and to gain superiority in order to meet him. Her two marriages represented her efforts to free herself from the father but were futile because she only chose men who were surrogates

for the father and had many traits similar and equally difficult to deal with, or gain any satisfaction from. The love life was unfulfilled and a continuous disappointment, for she had never relinquished her primary wish to be the wife of the father. This wish had guided her in the choice of both husbands, and had affected her conduct with them so that instead of acting the same adult role that she was able to exhibit in the face of the real world she fell back into the same over-anxious childish attitude she had displayed to the father. When she recognized the nature of her desire for the father, the unconscious incestuous wish and the consequent inability to act fully mature in the love relation because of the repression of sexuality before the incest barrier, the real release from the compulsion could be effected and a rounding out of her personality be achieved. It is certain she will never again suffer from a nervous breakdown.

The contrast between these two types of personality and the differences in mechanism are very definite and clearly illustrate both the ego inferiority and the sexual basis of the neuroses.

The moral conflict in the case of the lady was more definitely repressed than in the first case where the weaknesses and shortcomings so out of accord with the patient's ideals of what constituted manly conduct, were painfully realized. In such a case it is necessary to ease the pain and depression caused by the conflict by using the analytic understanding of the condition to lessen the burden of the personality.

To find that he is understood and not scorned is a tremendous relief to the introverted patient and is the first step towards the rehabilitation of the personality.

An opposite situation is found in the extraverted type as a rule and is clearly shown in the case of Mrs. C. She has no idea that the cause of her sickness lies in her own soul. It is because she has worked too hard, her husband had failed her; in other words, the external conditions of life are the cause of her trouble. The moral conflict in this instance is repressed and the patient has no idea of the nature of the wishes which play the part of fate in the life.

One has to proceed very carefully in such a case to reveal the unsuspected weaknesses and desires so contrary to the conscious thoughts and ethics of the personality that only with difficulty and pain can they be released from the repression. The resistance to be overcome in these cases is usually very great for the whole life has proceeded on the mechanism of forgetting the unpleasant and living in action rather than thought.

I do not mean to infer here that the mechanism of repression and resistance are not equally active in the introvert but, as he is usually more of the thinker than the doer, he develops what is called the logic tight compartment type of mind in which the complex is rigidly separated from the rest of the personality and proceeds on its independent way manifesting itself in the inadequate conduct and action which is so at variance with the theories and mental claims of the individual.

Indeed, we have had an example of a nation whose conduct can only be understood if we apply the technic of analytic psychology. Germany is an introvert, and it is comparatively a short time ago when one of her own greatest statesmen spoke of her scornfully as a nation of philosophers, dreamers and poets. Now in a brief space of time the rest of the world stands aghast at her conduct unable to understand her except as a deliberate hypocrite and outside the pale of humanity. She is equally unable to understand the other nations, and dazed by the scorned and hatred she has evoked, she regards them as merely leagued together to destroy her. She is unable to understand that her conduct is different from the rest whom she sees equally interested in the practical aims of life; she only thinks she is more thorough and efficient. This she certainly is, but she has no understanding that man does not live by logic alone and that even though the aims or purposes may be similar, the important factor is the means by which the purposes are achieved, and that the ignoring and ruthless disregard of all those humanities which mankind has so painfully acquired cannot be tolerated.

It is a very significant fact that although analytic psychology and its development arose from the German mind, it is Germany who has opposed its teachings most violently and where it has had its hardest struggle for recognition. To accept and understand the revelations of this work would mean that Germany would be self-revealed—her marked inferiority complex be exposed to view and the mechanisms by which she has attempted to overcome it become clear. Too much painful struggle and effort has been put into this achievement to allow this and therefore the mechanisms of repression and resistance are shown operating in their intensest form.

THE VALUE OF PSYCHOLOGICAL TESTS IN PSYCHIATRIC DIAGNOSES

BY FRANK S. FEARING¹

THE principal concern of the Psychologist in the field of mental measurement has been the examination and diagnosis of cases of congenital Amentia. The various scales for the determination in intellectual status have been used chiefly in testing for feeble-mindedness.

This restriction of the tests to a limited field has served to over-emphasize the purely *quantitative* side of mental cases while the usefulness of the tests on the *qualitative* side has been ignored. Not only has the qualitative performance in cases of feeble-mindedness been neglected, but the performance of the various types of mental cases such as the Epilepsies, the Psychoses and the Neuroses have received practically no attention.

Apparently the Psychologist interested in mental tests has felt that his tests had no value aside from determining the intellectual status of a suspected Ament. However, such limitation has made possible grave diagnostic errors, but it may be explained by the fact that many of the mental testers have had little or no training in purely psychiatric cases. For instance, what is the qualitative difference of the performance on a standard intelligence scale between a case of Epilepsy with mental deterioration and a case of definite Amentia? In answer it might be said that the epileptic convulsions would eliminate the possibility of error in diagnosis, and therefore the testing of epileptics would be superfluous. This scarcely is an adequate answer, though, since the modern psychiatrist can sometimes make a diagnosis of Epilepsy without there being a history of Grand Mal attacks. On the other hand, the mental peculiarities of an epileptic can be discovered by his performance on intelligence scales that are valid, and surely such added knowledge is of concrete value. The same is true of some of the Psychoses, for example, the blocking of thought process can be noted in performances of Dementia Praecox cases. Again, Constitutional Inferiority and Constitutional Psycho-

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pathic State are valid psychiatric diagnoses. What part in the clinical picture of these cases do the tests play?

From the viewpoint of the preceding paragraph it will be seen that test performances assume a new position. Instead of being the final determinant in a diagnosis, they become merely a part of the clinical picture of the case. This, it would seem, is their true position especially if the *interpretative* aspect is emphasized. The present tendency to overemphasize final scores made on tests without giving due weight to the medical history and physical examination of the case is removed. The field of usefulness of clinical psychology is thereby enlarged and an opportunity of coöperation between the Psychiatrist and Clinical Psychologist is afforded.

It will be the purpose of this paper to present this viewpoint and to accompany it by selected cases which have seemed typical. The cases presented are of Naval Recruits and men in training at the Fifth Naval District at Hampton Roads, Va., and were selected from the files of the Psychiatric Division of that district.

A word in passing may be said concerning the organization and aims of this Division. The Division was organized for the purpose of weeding out the mentally unfit from the naval service. Cases were referred to the Division from among the recruits at the U. S. Naval Training Station, from the U. S. Naval Air Station, and from the Base Hospital, all at Hampton Roads, Va. Psychological work was organized by the writer under the direction of Dr. Louis E. Bisch, Director of the Psychiatric Division.² Tests were devised which are discussed in detail in a paper by Dr. Bisch³ and forms adopted for the testing of recruits upon their entry into the service in the Fifth Naval District. The cases among recruits which were tentatively identified by these tests were automatically referred to the writer for an intensive psychological examination which consisted in the main of the giving of the Stanford Revision of the Binet-Simon Intelligence Test. Inasmuch as the activities of the Division were not confined to the identification of the feeble-minded, the writer had the opportunity of examining in a routine way all types of mental cases. The clinical importance of the tests early became evident in our work in the Navy and their diagnostic value in *all* types of mental cases

²Sincere appreciation is expressed by the writer to Dr. Bisch for the use of the files and for the encouragement and very helpful criticism from a psychiatric and medical side in the preparation of this paper.

³Bisch, Louis E.: A Routine Method of Mental Examination for Naval Recruits, U. S. Naval Medical Bulletin, Vol. 13, No. 2, pp. 198-229.

caused them to become an important feature of the psychiatric examinations.

The diagnoses under which the typical cases are presented are those used in the Navy nomenclature. It is not the purpose of this paper to discuss this classification of mental diseases. The theoretical differences between the diagnosis of Constitutional Inferiority and a diagnosis of Moronity present an interesting field of investigation, but the fact that such diagnoses are in use makes their consideration necessary to the clinical Psychologist. Only those cases are presented in which are included a Stanford Revision of the Binet-Simon Tests. The tests in the cases presented were all given by the writer under rigid experimental conditions.

On theoretical grounds it was felt that the qualitative differences in test performances would show a well-defined demarkation between functional and organic mental disease. While not a sufficient number of cases have been tabulated to confirm this supposition statistically, it has seemed in general that this differentiation would hold true. In the Naval service only the beginning stages of the various psychoses came under observation of our division. Hence it is impossible to present typical cases of all the Psychoses. Cases are presented and test performances contrasted of (1) Constitutional Inferiority (2) Constitutional Psychopathic State (3) Epilepsy (4) Amentia.⁴

The outstanding features observed in these cases was the fact that a diagnosis may not be made on the basis of the test score alone as has been pointed out in a previous paper by the writer.⁵ No diagnosis of feeble-mindedness may be made without the consideration of the score on some standardized intelligence scale, yet no such diagnosis should be made on this basis alone. It was found that, in general, the essential contrast between the performance of cases of Amentia and the other cases presented lay in the irregularity of the latter. In general, it may be said that in cases of frank Imbecility there was a definite blocking at a certain mental level. That is, the range of scores of the various mental levels of the scale was limited to a relatively small area. The Constitutional Inferiors and the Constitutional Psychopaths presented an unevenness of performance, and certain "spottiness" which was not typical of the Aments. The sec-

⁴Amentia and feeble-mindedness are synonymously used in this paper—both terms covering all degrees of mental deficiency.

⁵Fearing, Frank S.: *The Clinical Value of Psychological Tests in the Examination and diagnosis of Mental Cases*, Southern Medical Journal, March, 1919.

ond feature that was observed was in the qualitative difference of the two types. The feeble-minded presented certain typical characteristics in their performance of the various tests, and in their reactions to the various situations they identify themselves to the trained examiner. The unevenness of performance of the epileptics are especially noticeable; their scores usually extending over a wide range of mental levels. In the Constitutional Inferiors and Psychopaths the typical characteristics lie in the emotional reaction. In fact, it would seem justifiable to say that the essential quality that differentiates these cases is emotional inadequacy and emotional instability.

The following group of cases are presented as fairly typical of the Constitutional Inferior.⁶ A full medical history, physical and neurological examination was a routine part of our psychiatric procedure. The medical history, of course, could not be verified.

Case No. 281—Age 21. Patient is a recruit and made a low score on preliminary psychological tests at the Receiving Unit. Family history was negative. Personal history negative.

On the Stanford Revision of the Binet-Simon Test patient measured 8 years and 6 months. The tests ranging from the VII year level to the XIV year level. The coöperation on the tests was excellent. Patient talked in a low, monotonous tone of voice, reactions were exceedingly slow, and motor movements sluggish. Throughout the examination his facial expression was unchanged and it was impossible to elicit normal emotional reactions. Patient possessed many "stigmata of degeneracy," and his expression was dull and apathetic.

Case No. 882. Case was referred to the Division by one of the regimental surgeons. Family history negative. At the age of 8 patient was sent to an Orphanage, leaving this Institution at about the age of 18. Since being in the Navy patient has been under discipline three times; once for being 3 hours overleave, once for attempted desertion, and once for stealing.

In the physical examination the following "stigmata of degeneracy" were noted; adherent lobules, irregularly set teeth; rugae of tongue. Patient presented many of the institutional traits.

On the Stanford Revision of the Binet-Simon tests he measured 10 years and 8 months. During the testing the patient was exceedingly nervous, face twitched and perspiration was observed on the forehead and palms of hands. Responses were erratic and patient become very much excited when questioned regarding his sex life. The test scores ranged from the IX year level to the XIV year level.

From the history it was apparent that the patient has little sense of responsibility and appreciation of his duties in a military organization. The emotional instability was particularly marked.

Case No. 923—Case was referred by regimental surgeon. Family history negative. About three months before the patient stated that he had sustained

⁶All diagnoses on the cases presented in this paper were made by the Director of the Psychiatric Division, Dr. Louis E. Bisch.

a fracture of the skull and that ever since he has been subject to "dizzy spells." These spells come on especially when he becomes overheated, lowers his head, or rises suddenly from a lying or sitting position. Patient attended school 8 years reaching the fifth grade and stated that while in school he did not have the capacity to remember facts. On the Stanford Revision of the Binet-Simon Test patient measured 10 years and 11 months, the performance ranging from the VIII year level to the XVI year level. The coöperation on the tests was good, although the subject was very apathetic in manner and seemed lifeless and "washed out." The tests indicated memory and concentration defects. In appearance the patient was clean and well groomed. He possessed many well-defined "stigmata of degeneracy."

It will be noted that in the above cases the lowest mental age is 8 years and in two of the cases the mental age is above 10 years. It has been our experience that in most cases of Constitutional Inferiority the mental age rarely goes below the IX year level. The Constitutional Inferior may show no intellectual defect whatsoever, although this is an unusual condition. The important criterion in making the diagnosis of Constitutional Inferiority from the standpoint of the Psychologist lies in derangements of the emotional life of the individual. The emotional derangement is usually characterized by a marked instability or marked inadequacy. Too much importance may not be attached to the possession of the so-called "stigmata of degeneracy," but these are usually observed in cases of Constitutional Inferiority. The emotional instability has the effect on the test performance of causing an irregularity and unevenness.

Under the diagnosis of Constitutional Psychopathic State the following cases are presented:

Case No. 891—Referred by regimental surgeon. Personal and family history negative. While serving on the U. S. S. ——— the patient one morning immediately after reveille, in a dazed condition, went to the rail of the ship and jumped overboard. States that he does not know how it happened or why he did it. States that the first thing he remembers is that he was struggling in the water.

Patient gives a history of frequent dizzy spells and states that he also has "weak" spells which last for hours at a time, in which he feels restless and nervous. The patient was under observation in the Psychiatric Ward for several weeks and showed himself to be of a neuropathic type. He showed various "shut-in" characteristics, did not mix with other men and was difficult to draw into conversation. Emotional instability was marked, the patient being easily excited.

On the Stanford Revision of the Binet-Simon Test patient measured 9½ years, with a range from the VII year level to the XIV year level. During the psychological examination the patient was restless, resistive at times and seemed moody, and he sighed frequently.

Case No. 86—Patient referred from the Receiving Unit. Family history negative. Patient is a chronic masturbator and manifested various neurasthenic

symptoms. On the Stanford Revision of the Binet-Simon Test patient measured 11 years. Patient coöperated well on the tests and apparently was exceedingly anxious to make the best score possible. He was talkative, flighty and constantly offered explanations. At times he was incoherent and almost hysterical. The patient is a psychopathic type of individual and would surely develop a Psychosis under the stress and strain of military life.

Case No. 265—Referred from Receiving Unit. Family history negative except mother died of Tuberculosis and one uncle was in a hospital for the insane. The patient's reactions on the preliminary psychological tests were of such a nature that he was considered a candidate for intensive examination. Patient stated that his mind at times was a "blank." He showed marked concentration defect, strained effort made him somewhat "panicky." Speech defect was present. On the Stanford Revision of the Binet-Simon Tests patient measured 13 years and 10 months with a range from the VIII year level to the XVIII year level.

Later classifications include Constitutional Inferiority under Constitutional Psychopathic State. The characteristics of the above cases were similar to those of the previous group except that the average mental age was slightly higher. The psychopathic traits were more marked than in the above group, although there was not sufficient evidence in any case to justify a diagnosis of insanity. Again a wide range of scores and irregularity of performance on the tests may be noted.

Our third group of cases received a diagnosis of Epilepsy.

Case No. 675—Referred from Receiving Unit. Family history negative except one brother who received a deferred classification in the Army draft because of insanity.

Patient gave a history of fainting attacks ever since he could remember; dizzy spells coming on almost daily. He stated that at times he would become unconscious for a short period, but denied convulsive seizures.

On the Stanford Revision of the Binet-Simon Test patient measured 10 years and 11 months, with a range from the IX year level to the XVI year level. On the tests the coöperation of the patient was good, although his manner was more or less colorless and mechanical. Patient's whole reaction suggested that he was suffering from an epileptic syndrome.

Case No. 683—Referred from Petty Officer Schools because he complained of having pains in his head, of feeling dizzy and unable to study. Family history negative.

Patient stated that in 1917 he was struck in the back of the head and was in an unconscious condition for about two weeks. He now complains of frequent attacks of dizziness in which his head "swims" and things become black before his eyes. The patient was under observation in the psychiatric ward for about a week. Examination showed him to possess considerable emotional instability and marked memory defect. He had a dull and apathetic expression and his general mood was one of depression. He was erratic in manner and very suggestible. On the Stanford Revision of the Binet-Simon scale he measured 6 years and 9 months, with a range from the III year level to the XII year level. His manner was naive and childlike.

Case No. 798—Referred from Brig because of an epileptic attack. Patient stated that he was subject to frequent nightmares and was observed in a typical Grand Mal attack.

On the Stanford Revision of the Binet-Simon Test patient measured 9 years and 5 months with a range from the IV year level to the IX year level.

The above cases were characterized by wide range of mental levels. The reactions were typical of the epileptic, being dull, apathetic and "washed-out."

Our last group are presented as typically feeble-minded.

Case No. 871—Prisoner awaiting court martial for refusing to stand watch. Family history negative. Patient had been 7 years in school reaching the 3rd grade and was unable to read and write. He has been under discipline numerous times for petty offences.

On the Stanford Revision of the Binet-Simon Test he measured 8 years with a range from the VII year level to the X year level. Patient was stolid and apathetic. Association was meager and stock of ideas was small.

Case No. 788—Referred from Receiving Unit. Family history negative. The patient was a butt of practical jokes to which he did not react in a normal manner. On the Stanford Revision of the Binet-Simon Test measured 8 years and 6 months with a range from the VII year level to the X year level. He was child-like and naive and would grin and laugh at irrelevant matters.

The two cases presented were selected from many similar cases and are typical of the feeble-minded group. It will be noted that range on test scores is narrow and that the psychopathic reactions on the tests are absent.

Conclusion. While no definite final conclusions can be drawn from the small number of cases presented, yet the following points seem to demand emphasis: (1) Diagnosis on mental cases should not be made on the basis of test scores alone. (2) A wide range of scores is significant in differentiating psychiatric types from feeble-minded types. (3) The reactions of the subject during the performance of tests is as important as the test score. (4) The performance of the Binet-Simon or some other standardized intelligence scale is an important part of the clinical picture in all mental cases.

The conclusions presented are only tentative, but it is believed that investigation in this field would yield suggestive results.

SIGMUND FREUD, PESSIMIST.

BY E. E. SOUTHARD, M. D.

IT WAS between trains that I made a small discovery concerning Freud which has a certain bearing on the war. The discovery some might think a truism, namely, that the genial Freud is, philosophically speaking, a pessimist. The bearing of this discovery on the war consists in the fact that Freud's lucid avowal of his philosophical pessimism is made in an article published in wartime (1915) in a special journal (*Imago*).

It was between trains on a trip to Washington that I was about to fall asleep in the great heat when Freud's little work on *War and Death* floated to the top of the war literature. I sat back contentedly and read with satisfaction the translators' preface with its amiable talk about "advancement of the cause of international understanding and good will." It was that amiable physician, Dr. A. A. Brill, and a *New Republic* contributor, Mr. A. B. Kuttner, who were to give me the end of a perfect day in their authorized translation of Freud's essay, first published in 1918.

I turned the leaves and was for the moment almost lulled to sleep by the serene breadth of sundry observations which seemed to lap England and Germany together in a sort of Freudian embrace of an almost millennial tone. I kept thinking how the international understanding and good will were going to be advanced, and I wondered how Freud could make such a terrible arraignment of Germany and survive, even though his words were written in 1915. I assumed that the "authorization" of the very pretty translation which Messrs. Brill and Kuttner had provided must have come before the American declaration of war. Yet perhaps the translators' preface had been written quite recently. Upon reflection, I could not quite convince myself that either Freud or his esteemed translators had pro-German propaganda in mind, even (as they might say) unconsciously. Evidently Freud was bringing some of the phenomena of the great war into the scope of his special views, and evidently his translators had been so astonished by the depth of the Freudian admissions concerning German immoralism (even in an essay published as early as 1915) that they felt it was high time to show how a real philosopher looked

upon these mundane happenings. This opinion of the translators seems well established by the text of their brief prefatory note, which for its propagandist value I reproduce:

"This book is offered to the American public at the present time in the hope that it may contribute something to the cause of *international understanding and good will* [italics mine] which has become the hope of the world."

A perusal and reperusal of the essay is well worth while, as indeed of any Freudian essay. Remarkable for its lucidity, well translated, the essay is, in sooth, an interesting and important one; but I had not advanced far in its reading when the desire for sleep forsook me and I began to rub my eyes with astonishment. For the thesis which Freud here maintains may be concisely expressed as follows:

Those who are not selfish and cruel are hypocrites. Selfishness and cruelty are the indestructible elements in man to which, repressed by civilization, we regress under the influence of war.

Below I shall offer quotations from a portion of Freud's essay to prove that this is Freud's thesis. But before coming to these details and before speaking of their propagandist value, I feel minded to point out that, should I be able to prove my point, Freud stands self-confessed as a philosophical pessimist of a very familiar, nay, even banal sort. I fancy indeed that Freud would himself cheerfully concede the point. He would probably say that not to proclaim oneself a pessimist, philosophically speaking, is to be a hypocrite.

Perhaps the translators are right. Conceding for the moment that Freud has been proved to be a philosophical pessimist, may we not remind ourselves that many well-known pessimists do see the "hopes of the world" in an *understanding* of the world's basic evil? Granting this, may we not give ourselves leave to doubt, however, whether the world's *good will* can ever be gained for the pessimism of philosophers. That evil exists, all concede nowadays save the Christian Scientists, who themselves have a way of putting a demon in the cathedral walls in the shape of Malicious Animal Magnetism. But the M. A. M. of Freud is far more thorough-going; for him the world is at bottom a world of selfishness and cruelty, upon which the illusion known as civilization rests like a thin and delicate film, only to be dissolved at a slight touch of reality.

But are we entitled to think of Freud as a pessimist in the same sense as we think of Voltaire, of Rousseau, and of Schopenhauer, those giant pessimists of an older generation? Or descending to a

more recent day, are we entitled to align Freud as one of the minor pessimists with v. Hartmann and Nietzsche? I know many amiable Freudians, including the medical translator of this book, and I know that in their daily lives they are cheerful souls, and some of them as merry as grigs; but so far as that goes, Voltaire and at times Schopenhauer were mirthful and gay; and it is well known that confirmed pessimists get a tolerable joy from their views, or despite them. Is, or is not, Freudism a form of pessimism? If so, and if the Freudian contentions concerning this war and the abolition of ethical restrictions" which characterizes it are correct contentions, then we must indeed look to our philosophical fundamentals to justify a continuance of this or any war.

After reading this book, in short, we may very possibly understand the war better, but we surely cannot like it any better. I am reminded here of a celebrated remark by (that contradiction of terms!) an *English Hegelian*, Mr. F. H. Bradley, to be found in the preface of his metaphysical work on *Appearance and Reality*. Mr. Bradley had resurrected a note from his commonplace book and put it in the preface:

"Where all is rotten, it is a man's work to cry stinking fish!"

In his apology for the great war, Freud may have done a man's work, but it is a little trying to have the stench cry to the heaven of our *good will*!

But are not Messrs. Brill and Kuttner right in their hope, and am I not wrong in believing Freud a philosophical pessimist? And, secondly, even if Freud is a pessimist philosophically speaking, is Freud not right, and will not "the cause of international understanding" be forwarded by our acknowledgment that Freud is right? It will be profitable to separate these questions.

Is, or is not, Freud a pessimist? I cast him above, along with v. Hartmann and Nietzsche, for the part of a minor pessimist. I mean no disrespect by the term *minor*: but surely all three of these philosophers are yet remembered by too many men for their mere personalities to allow us to add them to the heroes of philosophy. Moreover, being a minor pessimist is consistent enough with being a major contributor of something else to the world. Thus, v. Hartmann stood for at least one of the many varieties of the *Unconscious* which he defined clearly enough. And Nietzsche got up the *Will to Power*, which (though Nietzsche castigated Germany in the best possible German style) is thought by some to express best of all the present aims of

Germany. Again, Freud appears to have added *dream-study* to the technique of psychopathological analysis, and this contribution may well stand forever as an important one, when his pan-devilish Unconscious, his erotic symbolism, and his homuncular mechanisms have shrunk to minor proportions or to nil. Let us hand to Freud, what assuredly belongs not to Nietzsche, the palm of clarity.

But is or is not Freud a pessimist? As hinted above, I fancy that Freud would himself grant that he is a philosophical pessimist. As for the Freudians, I find that they do not always go the whole way, and I do not know quite what they will declare. Freud himself certainly plumps for what he plumps for, whether it be sex or the Censor, dreams or Germany.

I want now to recall some of the well-known facts concerning the history of pessimism that might apply to Freud. But in order to hold his thesis in mind and test it by comparison with the outstanding pessimism of the past, let us listen to some of Freud's remarks. I paraphrase from an early point in the essay:¹

Civilization is an illusion dashed to pieces by collision with a bit of reality.

Again:²

"States and races" have in the war "abolished their mutual ethical restrictions," so that they have been observed *"to withdraw from the pressure of civilization."*

Again:³

"Our conscience is not the inexorable judge that teachers of ethics say it is; it has its origin in nothing but 'social fear'."

Again,⁴ we find

"Civilization built upon hypocrisy."

Again;⁵

One is a hypocrite who "reacts continually to precepts that are not expressions of impulses."

I shall below try to give some idea of the logical connection between these statements, but before doing so, let us get in mind the philosophical pessimism of history. The following parallel columns give a rough idea of the history of these developments down through the great names of Hegel, as optimist, and Schopenhauer as pessimist.

¹Page 16-17.

²Page 30.

³Page 15.

⁴Page 28.

⁵Page 28

Note that some names, as Plato, Rousseau, Kant, Darwin, appear in both columns, either because their points of view were double or because their conclusions have been used by both parties.

MAJOR
OPTIMISTS

PLATO
STOICS
LEIBNITZ
ROUSSEAU
KANT
HEGEL
DARWIN

MAJOR
PESSIMISTS

PLATO
EPICUREANS
VOLTAIRE
ROUSSEAU
KANT
SCHOPENHAUER
DARWIN

My suggestion now is that we can offer a list as follows of

MINOR PESSIMISTS

V. HARTMANN
NIETZSCHE
FREUD

As to pessimism, like most things philosophical, the historians carry it back to the arch optimist Plato. Plato thought that, on account of the connection man had with his material body and with the world of sense, the life of man had evil thrust upon it. The eternal good of Plato was accordingly limited by this material element of "non-being." The Epicureans and the Skeptics took up this pessimistic factor in the Platonic account and, dwelling upon the actual bulk of pain and evil in the world, thought to confute the ethics of the Stoics, who had followed the more optimistic main line of the Platonic conception. In fact, the Epicureans were more empirical than philosophical in their pessimism. The man of the world acknowledges the existence of pain and evil; the Epicurean simply found that pain and evil bulked larger in the world than the goodness of it and hence were obliged to be empirical pessimists.

No great contribution to the philosophy of pessimism appears to have been made from the time of Plato's pessimism, as expressed, for example, in Book X of the *Republic*, until quite modern times. Voltaire wrote in three days his famous novel *Candide* in ridicule of the

idea that our world is the best of all possible worlds, and perhaps it is unfair to ground a philosophical pessimism upon what was intended to be a mere skit. Still, the Voltairian contentions were at least symptomatic of the views of many in his time, and possibly became the views of his patron and pupil, Frederick the Great. Marshal Foch has pointed out how France introduced nationalistic warfare into the world in the Napoleonic era, and how this kind of warfare has come back to plague France. It is equally true that the notions of the French pessimist Voltaire may be said in the person of Frederick the Great of Prussia also to have come back to plague the land of their origin. As opposed to such pessimism as that of Voltaire is the optimism of Leibnitz, as expressed in his *Theodicy*.

In contemplating the views of Epicureans and Stoics, of Voltaire and Leibnitz, the psychiatrist is inclined to inquire how much of mental deviation may lodge in these philosophers, particularly in the pessimistic persuasion. I suppose that it must remain doubtful whether Voltaire was an out-and-out psychopath. That he was "all intellect" and somatically an odd stick may stand without question. On the whole, however, it remains far more doubtful in the case of Voltaire that he was psychopathic than it remains in the case of his successor, Rousseau. As for Rousseau, it would be a pretty inquiry how far his views were not merely colored but manufactured by his psychopathic temperament. According to Rousseau, man was naturally good but rendered evil by culture. Accordingly, Rousseau started his back-to-nature cult and made many a princess try her luck as a shepherdess. He is a man whose contentions may be placed on both sides of the account. Rousseau is in one sense an optimist, in another sense a pessimist. It may be observed that his view is in one sense the inverse of the Freudian view, for according to Rousseau, man is by nature good and by civilization rendered bad; whereas for Freud it would appear that man is by nature bad—that is, a compound of selfishness and cruelty—and that we can only hope for a little "sublimation" by the obscure processes of history.

Kant was doubtless greatly influenced by Rousseau. Whether Kant was psychopathic is as doubtful as in the case of Voltaire. However, he underwent a temperamental change in his life. From being a confirmed optimist, he appears finally to have become a believer in a radically base element in man, an element so extensive and important as to warrant Kant's being regarded as, if not a pessimist, nevertheless a father of pessimism.

As for Hegel, he assuredly regarded the world as evil if it was viewed statically in a cross-section at a given time. But the world in process, the world of actuality, was for Hegel a good world, and he has had many followers in the attempt to prove that evil is somehow good. Kant's view had run in somewhat the same direction. For Kant had been an optimist in regard to the potentialities of man, though a pessimist in regard to the present situation. Though man had a good motive in him, namely, the rational and universal motive of humanity, nevertheless the tendency on man's part was to make his motive of action out of mere self-love. To be sure, in a state of nature, both Kant and Rousseau felt that man had good natural propensities, rather naturally fitted to the ends of man. He was, as it were, in a sort of Garden of Eden, in a physical state of Paradise and in a moral state of complete innocence. It was, perhaps, not a snake which caused his fall, but it was something equivalent, namely, Consciousness. When a man grew conscious, according to Kant, he found he had a will, and by means of this will he got away from the natural law that governed his instincts. Through the operation of this will of his, man became evil. If civilization and culture are a product of the natural desires of man, then civilization and culture become non-natural affairs. Nature and culture are in conflict. The individual turns out to be necessarily unhappy in this situation. It was not up to history to make the individual happy. History's plot was to perfect humanity as a whole. In the process of this perfection, we were going to suffer tremendous conflicts and pain.

Hegel now took optimistic lines: somehow history was perfecting humanity. Perhaps it would not be too flippant to consider that Hegel felt that it was Germany's part to secure through history the perfection of humanity. We Anglo-Saxons, and of course also the clear-headed Latins, are a bit amused at this curious idea of Germans as the chosen people: but one does not feel that Hegel had any particular sense of humor in this regard.

Whereas Hegel laid hold upon the perfection of humanity in point of time, Schopenhauer laid hold of the Kantian notion of the will. Man, according to Kant, found he had a will and became through this will evil. There was a radical evil in the nature of man, of which for Schopenhauer the best account was that it was somehow the will. The rest of the Schopenhauerian story is to be read in every textbook of philosophy.

V. Hartmann now laid hold of the will concept and developed

from faint beginnings in older philosophy the semi-mystical concept of the Unconscious, a concept which is used to this day by the Freudians. V. Hartmann himself, despite his tremendous vogue and modishness, appears to have been a lucid critic, not only of other people's notions, but also of the Unconscious, and has left an analysis of the types of the Unconscious used by the different philosophers to the number of seventeen! That there was anything psychopathic about v. Hartmann that influenced his work is doubtful, though we may give full credence to the idea that temperament played a part. Darwinian notions had now become current. The Darwinian evolution could be used effectively by Herbert Spencer as an argument towards a millennium, and from that point of view one might regard Darwinism as a quintessence of optimism. But the pain and annihilation suffered in the struggle for existence might well lead to the employment of Darwinian concepts for the purposes of pessimism, and this it would appear has been the special task of many German authors. One seems to see in Nietzsche distinct traces of this use of Darwinism. While Sir Francis Galton was quietly developing his Viriculture and his noble concepts of Eugenics, Nietzsche was on the other hand depicting the ideas of the Blonde Beast and the Superman. Elements of logical identity might be found for these Galtonian and Nietzschean ideas, and the psychiatrists would be tempted to lay to the matter of temperament alone much of the difference between a Galton and a Nietzsche.

The Massachusetts Commission on Mental Diseases recently purchased a set of the works of Nietzsche, and the sober and astute financial officers of the State could find no fault with the purchase of such excellent psychopathic materials: Could not the state research officers profit by a direct study of the works of Nietzsche as much as by the study of case records from their hospitals? As in Rousseau, so in Nietzsche, we find obvious psychopathy. Perhaps it is even more obvious and more thoroughgoing in its effects in the case of Nietzsche than in the case of Rousseau. Nietzsche, born in 1844, appears to have been clearly psychopathic as early as 1876, and became obviously insane in 1888, dying only in 1900. Of course, it may be pointed out that Nietzsche revolted against pessimism and really in a way inverted the views of Schopenhauer. He wanted life led vigorously just because it was painful. Nietzsche had in himself enough psychopathy to study. Schopenhauer had studied the relations of moral and physical at the Berlin clinic of the Charité. In the twenties Schopenhauer had kept loaded weapons at his bedside. These two great pessimists

in the history of philosophy are, beyond all question and cavil, psychopaths. Shall we not draw a lesson from their psychopathy and seek, amongst other milder, milk-and-watery pessimists of a more modern day, the causes of pessimism in temperament?

In this wholly superficial analysis of the history of pessimism, whose main facts lie at the surface of every historical work, I do not mean to argue for or against the truth of pessimism. The decidedly healthy mind of William James found "a deep truth in what the school of Schopenhauer insists on—the illusoriness of the notion of moral progress. The more brutal forms of evil that go are replaced by others more subtle and more poisonous. Our moral horizon moves with us as we move, and never do we draw nearer to the far-off line where the black waves and the azure meet."⁶

One of the best popular accounts of pessimism is in James' essay "*Is life worth living?*" James there points out how "Germany, when she lay trampled beneath the hoofs of Bonaparte's troopers, produced perhaps the most optimistic and idealistic literature that the world has seen; and not until the French 'milliards' were distributed after 1871 did pessimism overrun the country in the shape in which we see it today." And no doubt there were political and economic factors in the development of the pessimism of modern Germany. In another portion of "*Is life worth living?*" James speaks of speculative melancholy as not necessarily an outcome of animal experience. He speaks of it as possibly the "sick shudder of the frustrated religious demand."

With respect to both Nietzsche and more modern pessimists one wonders how far this insight of James really carries. Certainly in Germany itself at this time there appeared to be tremendous readjustments in the attitude to religion, out of which one gets the impression that a frustrate state of mind must come. James regards pessimism as essentially a religious disease. He elsewhere defined it as "consisting of nothing but a religious demand to which there comes no normal religious reply."

Where there is no free will there is apt to be no religion, and pessimism has usually, though not always, allied itself with a philosophy which denies free will, namely, with determinism. Some provision for free will or the importation of novelty into the world, some concession of indeterminism, seems to be required for the religious man. Freud can probably be shown in all his works to be a determinist. That he

⁶P. 169, *Will to Believe; Essay on the Dilemma of Determinism*, 1884. P. 47, "*Is Life Worth Living?*" Wm. James.

is always so obviously a pessimist as his essay on *War and Death* implies, I think we cannot be certain. But is it not clear from even a superficial analysis of the history of optimism and pessimism that Freud is, historically speaking, nothing but another bead on the string of pessimists? Is he not using the most frequent tool of pessimism, namely, a world system without free will, without (so far as I can see) the operation even of absolute chance in the sense of Charles Peirce? a world system which employs that Jack-of-all-trades, the Unconscious, to secure results which a deterministic or fatalistic formula would not readily secure?

Of course, one must insist that determinists are not necessarily pessimists, and *vice versa*. As James acutely remarks, "Our deterministic pessimism may become a deterministic optimism at the price of extinguishing our judgments of regret." If we cease regretting and let by-gones be by-gones, we shall not need to be pessimistic. Neither v. Hartmann nor Freud has quite the "wild-eyed look" at life which James charges the pessimist with having. Schopenhauer and Nietzsche, obviously psychopathic, may readily answer to the charge. On the whole, however, one feels that the world of Freud as expounded in the last twenty odd years is a *somewhat* wild-eyed world, a "nightmare view of life," as James elsewhere expresses it.

In this new essay on *War and Death*, Freud however seems really to have let the pessimistic cat out of the bag of mechanistic tricks. I return to some quotations from Freud's essay, which runs as above-mentioned to the astonishing conclusion that everybody is a hypocrite who is not wholly selfish and cruel and that war tears the mask off this hypocrisy. War tears the mask off this hypocrisy whether it be a subjective or an objective one, for Freud opines that he has really found a *novum genus* of hypocrisy—*objective hypocrisy*.

Civilization, we saw above, is according to Freud, an *illusion dashed to pieces by collision with a bit of reality*. Accordingly our *disappointment over the war* is "strictly speaking [*i. e.*, intellectually?] *not justified, for it consists in the destruction of an illusion.*"

Freud writes avowedly as a German. He concedes that "science has lost her dispassionate impartiality." Would he grant himself one of "her deeply embittered votaries, intent upon seizing her weapons to do their share in the battle against the enemy?" Possibly. For, on a later page, Freud writes: "We live in the hope that impartial history will furnish the proof that this very nation, in whose language I am writing and for whose victory our dear ones are fighting [curiously

enough, Freud is an Austrian, though he seems here to identify himself with Germans], has sinned least against the laws of human civilization," and proceeds: "But who is privileged to step forward at such a time as judge in his own defense?" On the whole, however, Freud throughout makes a brave show of philosophical impartiality and cheerfully assigns to both sides an equal guilt in regard to the war's exposure of our (in Freud's eyes) fundamentally evil nature. "States and races" are described⁷ as having "abolished their mutual ethical restrictions" so that they were seen "to withdraw from the pressure of civilization." Both sides, he seems to concede, are equally at fault. I take it that Messrs. Brill and Kuttner were astonished at so great a concession by a German as the concession of mutual guilt. May this not be the true explanation of that extraordinary preface by Messrs. Brill and Kuttner about contributing to "the cause of international understanding and good will?" A German, writing to be sure from Austria, concedes a portion of guilt as Germany's. Is not this a bit of a *rapprochement*? Is not the time approaching for a Gargantuan embrace of the nations, a Brobdignagian kiss and make-up? This I can readily believe was a part of that which lies under that prefatory note. Another bit of underpinning is probably the belief that the world might well await the pronouncement of a Freud as a genuine oracle. For Freud has his votaries, and not the least of them is Dr. Brill.

Now, quite seriously speaking, I grant the oracle part and will not stoop to calling the stuff that emerges "Delphic"! It is lucid enough. It is important stuff also. But is it true?

Perhaps the most exact statement of the fundamental pessimism of man's nature is made in these terms:⁸

"The most pronounced childish egotists may become the most helpful self-sacrificing citizens," and "*The majority of idealists, humanitarians, and protectors of animals have developed from little sadists and animal tormentors,*" and, more summarily, "The earlier infantile existence of intense 'bad' impulses is often the necessary condition of being 'good' in later life."

Let us stoutly resist at this point the wish to doubt the cogency of all this logic and to question the accuracy of this psychology. Let us merely try to understand the implications of Freud concerning the pessimistic basis of many phenomena of this war.

⁷Pages 13, 2 and 30.

⁸Page 21.

*Egotism and cruelty are primitive impulses in us.*⁹ There is a "deceptive appearance" of altruism in place of egotism (Messrs. Brill and Kuttner use "egotism," not egoism, here) and of sympathy in place of cruelty. Again let us resist questioning the accuracy of the term "deceptive" in this transformation and let us rather try to get Freud's point. "*We learn to value being loved as an advantage for the sake of which we can renounce other advantages.*"¹⁰ Again, "The influences of civilization work through the erotic components to bring about the transformation of more and more of the selfish tendencies into altruistic and social tendencies."¹¹ Or still more pointedly, "Our conscience is not the inexorable judge that teachers of ethics say it is; it has its origin in nothing but 'social fear.'"¹²

But how and why is this transformation "a deceptive appearance" only? If it be a transformation, why is it not a transformation? Why does it turn into an appearance? Well, one reason is "ambivalence" (love—hate, etc.) ; but, passing over this sleight-of-hand, we learn that society's system of rewards and punishments does not always effect a genuine transformation. One person may, to be sure, be "always good because his impulses compel him to be so, while another person is good only in so far as this civilized behavior is of advantage to his selfish purposes."¹³ Honesty is here the best policy with a vengeance! "We shall certainly be misled by our optimism into greatly over-estimating the number of people who have been transformed by civilization."¹⁴

Still forbearing to question the facts or the uses to which the alleged facts are put, let us on. These prudential hypocrites ("civilization built upon hypocrisy"¹⁵) ought, one might think, to be allowed the free and cold-blooded use of their algebra of worldly success. But no! civilized obedience, even for selfish purposes, seems to put a strain on this majority group of untransformed egotists. They are somehow the victims of "a continual emotional suppression."¹⁶ "*There are therefore more civilized hypocrites than truly cultured persons.*"¹⁷ As to these hypocrites, it does not matter (according to Freud) whether they are conscious of their hypocrisy or not. *You are a hypocrite even if you do not know it—an "objective hypocrite"*¹⁸—and you are in

⁹Page 19.

¹⁰Page 21.

¹¹Page 22.

¹²Page 15.

¹³Page 26.

¹⁴Page 26.

¹⁵Page 28.

¹⁶Page 27.

¹⁷Page 28.

¹⁸Page 28.

fact a hypocrite whenever you "react continually to precepts that are not expressions of impulses."¹⁹ The only impulses in question, be it remembered, are those of selfishness and cruelty.

It is thus fair to say that *those who are not selfish and cruel are hypocrites*. Those who are not selfish and cruel are victims of civilized suppressions. Hypocrites, whether conscious or not of their hypocrisy, are under a strain because they are not continually selfish and cruel.

Still not inquiring how true all this may be, let us ask how Freud makes it seem so to himself? It is because "the primitive psyche is in the strictest sense indestructible." The fact that psychic evolution is thus "unique" in the world of development does not stagger Freud in the least. *Au contraire!* For some reason Freud terms this alleged property of the psyche "plasticity." The indestructibility of the primitive psyche is just the plasticity of the psyche. Put otherwise, the (alleged) fact that selfishness and cruelty cannot be destroyed is an example of mental plasticity! The mind is "plastic" because you can always get down to selfishness and cruelty. In fact this vaunted plasticity is pretty much a one-way path of retrograde action or "regression." In fine, we poor mortals tend to selfishness and cruelty. Or, as one might say, man is cacotropic (a neologism of my own!). War creates these regressions, as it were hastens this cacotropic trend.

Selfishness and cruelty, or, more briefly, evil, is the indestructible element in man. And there is a pressure upon us, a "repression," when we get away from this indestructible evil core. In short, even the higher ethical processes are (here Freud might or might not follow me) in themselves evil, just because they produce these inhibitions, pressures, suppressions, repressions, hypocrisies. And, whether you feel any pressure of *Kultur* or not, anyhow aggression is your lot.

Well! what is to be the basis of international good will? Evidently whatever anybody in this war does is after all only to be expected. The *Apologia Freudi pro bello maximo*, as it might be called, is simply the *Apologia maxima et simplicissima*, viz., there is a radically base element in man to which he regresses in war.

With this blanket apology, let us now internationally be satisfied. The remedy? "A little more truthfulness and straightforward dealing."²⁰ Just what good this straight truth would do, I am bound to say

¹⁹Page 28.

²⁰Page 39.

I do not see; for all that we should clearly see would be that the evil in our psyche was indelible!

From all which one might veritably deduce that Freud was not only a pessimist, but a determinist. As apologist for the war Freud is, I think it may be allowed, a pessimist. It happens to be to Germany's interest to follow the Freudian argument. As *propaganda Teutonica*, the essay is admirable. Though Freud himself may be philosophical enough to view quite impassively the minimal differences in regression he sees between the two enemies, eager propagandists will readily seize on one fact. Had this war not been started, then these gigantic repressions would not so soon have taken place. Hence, whoever started the war is responsible for it all. But the Teutons were centrally situated, so by nature on the defensive: hence the Entente is obviously at fault. Merely combine philosophical pessimism with anthropogeography, and the tale is told!

Intentionally or not, Freud, I hold, has so manipulated his pessimism as to make a subtle apology for the Central Powers, all the while parading on the high line of impartial weighing of both sides.

Both sides "have abolished their mutual ethical restrictions." Instances of their regression I find in Freud's pages to the number of twelve classes. I understand Freud to intimate that both the Teutonic and the Entente Allies have been guilty. I simplify by letting it seem that Germany and England stand for their respective allies in this wrong-doing.

1. England and Germany have regressed from that stage of community progress long ago reached by the Greek anphictyonies that forbade (a) destruction of a league city, (b) the felling of oil trees, (c) cutting off water supply.²¹

2. England and Germany have not afforded complete protection to the wounded, the physicians, and the nurses.²²

3. England and Germany have not properly considered the rights of non-combatants, of women, and of children.²³

4. England and Germany have not in the processes of war sought to maintain the projects and institutions of international corporate life.²⁴

5. England and Germany have placed themselves above the rights of nations and all restrictions pledged in times of peace.²⁵

²¹Page 10.

²²Page 10.

²³Page 11.

²⁴Page 11.

²⁵Page 12.

6. England and Germany have not respected the claims of private property.²⁶

7. England and Germany have made free use of every injustice, every act of violence, that would dishonor the individual.²⁷

8. England and Germany have apparently outdone the customs of previous wars in the degrees to which they have employed conscious lies and intentional deception against the enemy.²⁸

9. England and Germany have intellectually repressed their citizens by excess of secrecy and censorship of news and expression of opinion.²⁹

10. England and Germany have absolved themselves from guarantees and treaties by which they were bound to other states.³⁰

11. England and Germany have made unabashed confession of their greed and aspiration to power.³¹

12. England and Germany have, by abolishing conscience (*i. e.*, "social fear") caused individuals to commit acts of cruelty, treachery, and deception.³²

Freudism, if this account be correct, is certainly an extremist view of the universe; almost as extremist a view as that of Eddyism, to which allusion was made above. Why not ticket Freud pessimist and have done, just as we ticket Eddy optimist and have done? Why not use as practical physicians Freudism and Eddyism as alternative methods of cure by suggestion? On the one hand a suggestion that your native badness be now sublimated, on the other hand a suggestion that your badness simply does not exist at all? The choice of patients for Freudian sublimation or Eddyian subtraction of morbid agents might then depend upon the temperament discerned in the patient. These would be the *All-or-None* (as the physiologists say) alternatives of a two-way system of psychotherapy—back to the doctrine of original sin on the one hand, back to the doctrine of original bliss on the other. We might counsel brunettes for psychotherapy, Freudian type, blondes for psychotherapy, Eddyian type. Or possibly thin persons ought to be psychoanalyzed, fat ones given absent treatment. *Red slip; Sublimate! Blue slip: Oblivisce!*

Suggestion, Bernheim declares, is an *idea accepted*. Very well!

²⁶Page 14.

²⁷Page 14.

²⁸Page 14.

²⁹Page 14.

³⁰Page 14.

³¹Page 14.

³²Page 16.

Technique matters not, so the result be obtained. On the level of this broad definition the sage and catholic physician might choose to-day psychoanalysis, tomorrow Christian Science, for patients of different or shifting dispositions, on the sound psychological basis of the great polarities of man—towards pessimism, towards optimism. For the pessimist who is but half-hearted, a mere pejorist, we counsel thorough pessimism: *In the great world evil, sink thy small soul's evil and know that, whate'er befalls, thou canst but slide briefly down to the garden known of yore, wherein grows the Tree of Evil!* For the mere meliorist, him we counsel thorough optimism with its lotus-leaves: *Extinguish thy sorrow and all thy judgments of regret: Forget and know that what thou shalt forget exists not, nor know we how that ever did exist, saving only by M. A. M.*

Some of these features I place in parallel columns:

<i>Eddyism</i>	<i>Freudism</i>
Idealistic	Materialistic
Indeterministic	Deterministic
Optimistic	Pessimistic
Evil Illusory	Good illusory
But, M. A. M.!	But, Sublimation!
Forget!	Recall!
Spiritual and Absent treatment	"Catharsis," Intimate re-education
Disease: delusion	Disease: flight from reality

I mean no disrespect to Freudism or for that matter to Eddyism in these parallel columns. One may regard Eddyism as a degenerate or pseudo form of idealism, a sort of backwater in the American philosophy of Emerson. One has naturally no design of denying the cures affected by Christian Science. As for Freudism, the logic is as finely drawn and complex as Mrs. Eddy's is coarse-meshed and simple. Eddyism is sectarian. Though Freudism threatened at one time to become sectarian, doubtless we now see a tendency to the utilizing of Freudian concepts in everyday terms. In fact, some are discovering that much of the novelty in many Freudian contentions lodges in nomenclature only. I am utilizing the parallel columns for the purpose of showing that any extreme optimistic view and any extreme pessimistic view is quite unlikely to be a sound view. At all events, the man who confronts the phenomena of Eddyan optimism and Freudian pessimism has the question sharply put up to him. What

after all is the truth about this world? Is it a radically evil world or not? Evidently Freud believes and avows that it is, and on that ground can justify anything that even Germany could do.

I said above that we could well separate the questions, Is Freud a pessimist, and, Is pessimism so? I consider that I have sufficiently proved that Freud is a pessimist. But why should he not be?

Why should we not be philosophical pessimists if the primitive and indelible instincts of us all are those of selfishness and cruelty? *The* instincts! Here we could toss the ingenious Freud in a number of logical blankets. I forbear! Whether my primitive instinct is not one of cruelty or whether I am buoyed up on a cloud of illusion, I forbear to show that Freud cannot tell *some* from *all*. We are all engaged now in trying to teach Pan-Germany that little distinction, *some versus all*! Freud, the subtle spokesman for Teutonic crimes,—can be really not tell the particular from the universal? Does he really think the one indestructible thing in man is a pair of instincts, selfishness and cruelty? Has he ever spent five minutes with books on instinct? Or is he merely a special pleader, choosing as propagandist to omit mention of all instincts save those he wants?

A slight technical acquaintance with Freud's writings will, I assure the reader, show quite readily that Freud is perfectly capable of all the arts of logical fencing. I do not deny that Freud might, to prove an honest point, deliberately suppress a lot of little instincts that seemed to him trivial in comparison with selfishness and cruelty, *e. g.*, such familiar instincts as gregariousness, constructiveness? Again, what does he do with selfishness and cruelty themselves: are they identical or not?

A truce upon such stuff, the pragmatic American wearily cries. No one really believes it. Freud is just the pepper of our substantial flow of soul. Freud is just the spanking we easy-goers perpetually need. There is a time for Freuding and a time for Eddying. Thus the pragmatic American.

But will said American ever wake to the fact that perhaps Freud really believes his talk and that perhaps the one good reason for Freud's believing is Freud's temperament? Will the American ever wake to the fact that perhaps the Germans, dear to Freud, really believe that everybody in the world is, according to the Freudian formula, a subjective or objective hypocrite? Will the American ever wake to the fact that, not militarism, but pessimism, not soldier-worship, but devil-worship, is the philosophy, the religion, of Germany? To the fact

that, though every trace of the cruelty-machine were obliterated, the selfishness-machine would survive? To the fact that these Germans are of this subjective belief: that civilization is founded on hypocrisy? To the fact that all seeming proofs to the contrary are taken by the Germans as but tokens of a deeper hypocrisy?

Crush militarism out of Germany as we may, we shall not regenerate her so long as this Freudian formula of universal hypocrisy prevails. Voltaire with a laugh gave a *Candide* for a *Theodicy*. Darwin, who read German with difficulty, handed the psychopath Nietzsche some *matériel* which the psychopath Schopenhauer had not. The lucid v. Hartmann and the lucid Freud, apparently without a trace of psychopathy in them, serve symptomatically up to the modern German taste such philosophy as I have sketched above. Only a certain élite subjectively believed a v. Hartmann of yesterday or subjectively believe a Freud of today. But—let us borrow a little logical trick from Freud—if Freud can talk of *objective hypocrisy*, let us talk of *objective beliefs*! Germany, I consider, at times subjectively, but for the most part objectively, holds to the philosophy of pessimism. It will be Germany's fault, cried Nietzsche, if we do not get rid of Christianity. But why prod the poor Blonde Beast? *Objectively* he had already gotten rid of Christianity and all its likes. With a certain bravery the psychopath Nietzsche threw out the banner of the *Wille zur Macht*. He had painted the black lily of Schopenhauer with some foreign pigments. Darwinian were they—but “where all is rotten”? Hear ye, Hear ye, O objective hypocrites! A little straightforwardness and truth! “Where all is rotten!” Live not in despite of evil: Live and will your lives to power not in despite of evil, but because of evil.

Are the Germans psychopathic? The inquiry is open: They themselves have lodged the question, Is not France affected by the revenge-psychosis, *Psychopathia gallica*? No! No! soberly answered a German critic of this *Psychopathia gallica*. No! No! for in that case we should be compelled to pity France, poor morbid France! One does not indict a whole nation, even France, not even Germany.

I have not called Freud psychopathic; I do not call Germans psychopathic, much as I should like to pity him and them. I find him and them philosophically pessimists and believers in absolute evil. I consider that the most brilliant expressions of pessimism have been really psychopathic, witness Schopenhauer, witness Nietzsche. These men were temperamental extremes of a psychopathic degree, beside whose

brave wailings the stuff of v. Hartmann and of Freud seems anemic and banal. But—is it not always so?—when the psychopath leads, the stampede psychology of the mob is ever more violent. Why? I know not. Perhaps because the psychopath often expresses himself with abnormal clearness. Psychopathic sincerity is ever more persuasive than the common sort. Beware the clear issue! It is not real. The world is yet obscure. Who is this demagogue who has (thank God for the word) *doped* out this transparency of thought? Voltaire tucked a little germ in. Rousseau rubbed it deeply into Kant, who grew old with it. Napoleon burned every soul with it. Schopenhauer psychopathically played with it and youth hugged the idea. Darwin gave them strength. The French milliards showed how goods might be delivered by the simple formula, Selfishness \times Cruelty = Goods Delivered. Nietzsche got the whole thing out nude. V. Hartmann nicely draped the Unconscious over all. Murder will out: for the eloquent Freud it remained to blab the whole thing: *The choir hypocritical!*

They borrowed the air-planes, they borrowed the submarines—but *mirabile dictu* they borrowed their philosophy! One thing they did not borrow—the psychopathic weapon, gas. In like sense, from the psychopathic essence of pessimism found in Schopenhauer and Nietzsche, they did not borrow—the poisonous idea of universal hypocrisy.

But did I not say that I might inquire, Is pessimism so? Bah! after looking up a few of the instincts, *e. g.*, in the ants, read a bit of Plato and enlist! All the while remember that some people, perhaps Freud, really believe the world fundamentally bad—mind, I say, *really believe!*

By the way, as I fell asleep over the Death part of Freud's essay (it was very hot on the way to Washington—think of all the nice fellows trying to be homothermous down there, that summer of 1918!), I dreamed a dream. *Pace Freudé*, it was about the Homeric Chimera. A Chimera is a Hypocrite. It is something of a Blonde Beast in front. It is, to be exact, a Lion in front. It is a Snake behind. It is midways a Goat. I seemed in my dream to be musing on orientation. The Snake seemed to be in Russia. In a dream you can see all around even a Chimera. The Lion part was roaring and bloody enough. The Goat part—Gambetta, Bryan, and I seemed to be pulling off a sort of *Levée en masse* together, when I woke up and lost a whole train penning these lines.

POSTSCRIPT

While the above paper was in press Mr. Charles J. Rosebault published in the New York Times, Sunday, August 24, 1919, in an article on "Americans Who Were More German Than Germans" some notes of an interview since the armistice with Freud. Mr. Rosebault quotes convincingly from Freud's book on "War and Death" to prove that Freud justified the Prussian theory of the supremacy of the state over morals and ethics. According to Rosebault, Freud is evidently reconsidering these published views and was unwilling to repeat them, saying that he had been fed upon nothing but lies for five years.

REVIEWS

A TRILOGY OF EDUCATIONAL METHODS

Dr. Ed. Claparède: *Psychologie de l'Enfant et Pédagogie expérimentale*. (1916, Librairie Kundig, Geneva.)

Maximilian P. E. Groszmann, Ph.D.; *The Exceptional Child*. (1917, Charles Scribner's Sons, New York.)

H. Addington Bruce: *Handicaps of Childhood*. (1917, Dodd, Mead and Company, New York.)

ON THE shelves of THE JOURNAL's office stand three books on Child Study, calling for the customary review.

As someone has said, three is a number convenient to reason about since it is the first in the scale of quantities that acknowledges two ends and a middle! We shall the more easily compare our authors. We place at one extreme (that of comfortable simplicity of statement) the presentation of Bruce on the *Handicaps of Childhood*, an excellent piece of popularization. At the other end of the see-saw, in a position somewhat more exalted and less accessible to intelligence, rises the offering of a facile and encyclopedic writer, whom the publishers have "featured" on the jacket of the book in a striking portrait of "the well-known child expert," M. P. E. Groszmann.

In the pivotal center, is the *Psychologie de l'Enfant* of Claparède (fifth edition), the appraisal of which appeals to us as a profitable preliminary to a discussion of the other two works.

Of course, it is distinctly a Swiss work. The author does not mind acknowledging the (to us obscure) labors of Doctor this and Doctor that, performed here and there in the small towns of the land of Pestalozzi. Should the reader smile at the parochial appearance of this field of survey, he should promptly be told that the ordinary High School (*i. e. Collège*) of Switzerland can give cards and spades to many of our supposedly full-fledged colleges and "universities." There, earnest education, intensive cultivation, without the blowing of any horns, is the rule. Yet Claparède is still restive under the inevitable red-tape of government schools. This very attitude assures us that what is to be put before us is likely to be the real meat of the problem of the child.

A REFLECTION OF SWISS EDUCATION

Although Claparède is a University teacher, and, moreover, is identified with an interesting foundation for experiments in education, now called The Institut Jean Jaques Rousseau, this does not imply over-devotion to a schoolroom point-of-view. For that dull and distressing interest in grades and marks that still flourishes in this country (to the extinction of the vital spark in child training) casts no shadow on his work. Claparède must be thought of as a biologist, and biologists are not often triflers with pedantic details. Sobered by the overwhelming intricacy of Nature, they desire to inform—not to astonish—the other fellow. This is exactly the cast of Claparède's thought. There is economy of style and of statement in this most substantial of offerings.

Far from imitating the anecdotal style of Rousseau,—symbol rather than exemplar of education in Switzerland.—Claparède, eschewing all that spurious anthropology that inspired the “back to nature” preachments of the eighteenth century educator, is thoroughly of the twentieth.

Perhaps as significant as anything is his wistful reference to the principles of scientific management (under the head of Taylorism) echoing, throughout the work, his invocation of the spirit of Motion-Study as the ideal of child-training. The implication of this reference is somewhat confusing to the American reader, who is led to recall “piece-work” and trade-union disputes. But a glance at Claparède’s introduction, with his moving defense of those too often unappreciated teachers who have labored to promote truly observational psychology in education, will at once reveal in what sense *scientific management*—in place of pedantry—is his goal.

The plan of his *Institut* for experimental pedagogy would seem to leave no room for educational side-shows; but, like a factory manager, Claparède’s interest is in *rendement* or performance. We wish his constant reminders in this direction, and his denunciation of EXPERIMENTS AT THE COST OF THE PUPIL could be read by certain members of the National Educational Association who, too often, approve pedagogical systems where experiment is only an intriguing oscillation between two fads.

THE AUTHOR NOT A FADDIST

Claparède is restful with the spirit of real questioning regarding education, not with the slogans and shibboleths of those American teachers who, at the end of the nineteenth century, had run psychology into the ground and earned the kindly rebuke of William James in his *Talks to Teachers*. Claparède notes how strange this warning of James against psychology seems to the European; but he shows excellent historical sense in explaining the difference between Europe and our America, where Child-Psychology—as Claparède is too polite to say—is mostly Psychology and very little Child.

The work is articulated; not a fluid mass like *L’Emile*. Above all it is not anecdotal. Do you want to grasp his approach to previous opinions: there is an eclectic outline of educational history in CHAPTER ONE.

In CHAPTER TWO, there is a statement of the problems of pedagogy, somewhat heavily laden with terms of the pediatric family; in which, however, “*pédagogie expérimentale*” deservedly stands out. This classificatory nomenclature is the part that is least helpful to the American student—and we tremble for perspiring schoolmarms in Summer Sessions. But to French minds, this chapter promises no difficulties; to them these partitions offer guide-ropes that make the mental traffic easier, although to some of us they will be as walls that conceal the objective. Even so regarded, there is an issue from this labyrinth: Claparède’s thread-of-Ariadne is his obvious tendency toward a distinct method, which leads us along and holds our hopes, in not unpleasant suspense.

CHAPTER THREE is much enlarged over the previous edition. It presents

splendidly and clearly those now well-crystallized deposits of mathematical, statistical and logical method whereby the immediate complexity of the human factor can be reduced to something like the picturesque simplicity of the Cartesian curve. The plot of the child-soul, as it were, becomes graphically intelligible. It is a vista that is presented with the skill that bespeaks the excellent orientation of the writer in biologic thought. All this is enhanced by well-chosen illustrations: the bell curve of Galton and similar frequency-curves, as pictured by massed rows of pupils in perspective, are ocular rest-camps. The chapter on Method would alone be a short-cut to those discussions of mental measurements that are the despair of ambitious, yet plodding school-teachers. Most presentations are only exemplars of how not to teach. What is more, Claparède does not desert his reader at the end of this third act, leaving him "*planté là*" at loose ends when the curtain goes down.

A BIOLOGIST'S VIEW OF EDUCATION-BY-INTEREST

The mind remains in well-ordered anticipation, when CHAPTER FOUR works out the *dénouement* of his pedagogic theory. It amounts to this:—mental development through the use of native biologic interests, like those evoked in the stimulus of games. To expand the idea, Claparède depicts the state called Interest with its full panoply of psychologic significance. His interpretation rests upon the biological formula that *interest*, as the Latin derivation reminds us, deals originally with something of importance to the individual—for which, thus, we may assume that he already owns a prepared mechanism of reaction. Education, we may infer, is training these interests (like the tendrils of a virginia creeper) to expand in a specific direction over the trellis of the Arts and Sciences. According to this biologist, education cannot afford to lose its point of attachment to the parent stem that feeds it—native interest. Needless to say, Claparède is not a defender of the sophister of Geneva to the point of favoring the exaggeration of the play-school idea until it becomes the as-you-will, *laissez-aller* type of education that has too often captivated American mothers who thought they were cheering the banners of John Dewey.

It is a pity that the Chapter on Intellectual Fatigue had to be omitted on account of the expansion elsewhere. Claparède promises us, however, a *thèse à part* on this and cognate topics. Perhaps it is just as well that he should have held it back, since in the present unformed and uninformed state of educational opinion on the very rudiments of intellectual fatigue, Claparède might well hesitate to enter the lists without taking an extra long breathing spell. Is it necessary to say that when he takes up anew the subject of Fatigue, having now so well tilted as the champion of Education-by-Interest, we may expect further victories over those who in theory and alas, in practice, refuse to admit "intellectual fatigue."

CLAPARÈDE: APOSTLE OF SANITY IN EDUCATION

It is useless in a review to try and sound the deep implications of Claparède's method of composing this treatise. It eludes immediate discovery because it comes from deep springs, being not at all like those shallow seeps from the groundwork

of education that the recent freshet of psycho-analytic outpourings on child study has occasioned. But a pretty little example of *multum in parvo* may be found on page 246, (Chapter III, Section 1) where he swings, as it were with one hand, Freud's silly explanation of infantile amnesia. Claparède's biological common sense and his refusal to be glamored by the Teutonic propaganda that has set so many American educators agape is shown when he very simply says: "We forget childhood memories because there is so little a mass of associations to form a cohesive body. It is not the inhibition of memories of childhood that we have to consider, but why so many should persist at all." Claparède here, facing a Freudian mare's nest, seems to echo the spirit of John Dewey's dictum that in philosophy we do not solve our problems—we get over them!

Everywhere, Claparède gives each author a run for his money. To read Claparède is to get over a great many problems, and to benefit by penetrating, with this wise Cicerone, many of the deceptions and mirages evoked before our eyes by the vaporous clouds of near-thought that have been exhaled over the waters of education. For the coming Revolution in educational methods we think Claparède would give us the campaign book and be, for the educational revolution, what Rousseau was (on a lower plane) for the French Revolution.

THE fascination of child-study—like the witchery of kodakery—depends upon order, selection, focusing and point of view. The result should be a just balance in the finished picture. If Claparède exhibits an orderly "travelogue," touching the natural history of education, Groszmann, on the other hand, has given us a collection of educational picture post-cards. For, somewhat scattered and choppily assembled bits of intellectual flotsam and jetsam compose *The Exceptional Child*. We imagine that to watch the author at his work and to be guided by his success with actual children would be even more profitable than to scan too anxiously this bag of chips from his workshop.

It is an encyclopedia *in parvo* of the great and growing problem of the child. Groszmann may be counted on to be aware of all the trends of opinion and to be all-comprehensive in his acknowledgement of them; although here and there a little too lenient with manifestly fly-by-night theories.

Where does this lead to? We should say, on the whole, that the outcome of reading—perusing would be a more manageable task—this book is that one realizes how much, how very much, pro-and-con one has to wade through, in order to be in the swim as an educator, to-day. Groszmann follows the fashion even to the extent of professing to be unfashionable on special points, like the use of the Binet-Simon scales.

A MANUAL OF SUPER-TESTS

His opinion of the Binet-Simon Test is pungently suggested in such a "bold-face" heading as "THE AUTHOR'S LARGER SYSTEM." The Binet-Simon tests may, as he thinks, be indecisive in regard to the pupil who is tested, but they are quite a touchstone in regard to the tester. Some, like Claparède, take Binet-Simon with

a grain of salt, and acknowledge, as does also Addington Bruce, that this contribution to educational "standards and specifications" is a notable one—and they rest at that point. Later, under another head and with a new breath, they may take occasion to point out that Binet & Simon have *not* evolved a new scheme to satisfy the market that clamors for a successor to the phrenological chart. But who needs to imitate the positiveness of Goll and Spurzheim's Phrenology nowadays?

Emerson, protesting against the arbitrary school of his day says: "I refuse to take a high seat and adapt my conversation to the shape of heads."

Now, Groszmann very properly refuses to be bound by the Binet-Simon scale, but he improperly fails to see that his own scale, although larger in its pretention, is not necessarily larger in results. Almost everybody now has some modification of his own; the real point is that none of these scales in the hands of any one not the inventor can be satisfactory, unless he or she is willing "to make it one's own." But for this consummation, there is sometimes lacking that biological facilitation of the type of Interest which we call "*amour propre*." Whereas, enthusiasm for something of which one can say "It is my own invention," may lead to a blossoming of undreamt skill in helping children out of their difficulties of adjustment. It is in this sense that even the exaggeration of the Mental Testing fad has helped-on educators to a higher stage of self-realization. In classic phrase "there is a treasure hidden in it."

The man who takes a Comenius-like interest in standardization, book-keeping and classification of mental traits, may, (through sheer captivation of his own pride) find himself a teacher in spite of himself. This is ostensibly true of the Binet-Simon scale, and the same is true of other scales, including "the larger system."

A REPERTORY OF CHILD-ANOMALIES

Although dealing very directly with the "exceptional" child, it is fair to say that the book sheds a light on all education, because all children are, in a sense exceptional. Or, to put the matter in a slightly different light, all children exhibit transitory exceptional phases that deserve scrutiny, and mental preparation on the part of the parent. Hence it is a boon to any educator (including any intelligent mother) to attempt to compass Dr. Groszmann's book. Like the field of the farmer in Aesop, it should be dug and delved into because "there is a treasure in it."

One real piece of value is the author's Classification Chart of exceptional children. Here the stress is upon pseudoatypical children—implying that many parents need no longer be faced with the bald question: "Is my child feeble-minded or is it not?" There are many mansions in the House of The Exceptional Child, and all the more room for individualized treatment.

The book has a good index and needs it. The Medical Symposium, from a galaxy of special workers, is a very eclectic addition of one hundred and forty-four pages, alone worth the price of the book.

As a whole, *The Exceptional Child* has not the disadvantage of being, or really pretending seriously to be, authoritative—dismal word in education—

but, on the contrary, shows the flux and seething in the various tendencies of education and that they are already drawing the hitherto calm medical circles into the pedagogic whirlpool.

WHAT is of interest to the student of abnormal psychology, in works like these, is not so much the actual opinions of the writers—for they are subject to change and evolution—but their testimonials touching the importance of studying ANOMALIES in child development. This means, in other words, enriching the current conception of the Abnormal. That this is a slowly growing conception is only too evident from the history of what was once called Morbid Psychology, and in the present-day mis-beliefs that are attached to the word *abnormal*; even as if it implied something outside the pale of Sanity.

Yet, we know that the exceptionally bright child and the retarded child lie equally in the province of the Abnormal—technically speaking. He, whom we might call the Anomalist in psychology, is still unfortunately, viewed as an “abnormal psychologist”—non-technically speaking—as if he were a psychologist off his beat. Yet he differs from his fellows, not so much in his preoccupation with the “morbid,” as in his reaping of benefits in that field for psychology as a whole.

THE FIELD OF THE ANOMALIST

So it happens, that, under the banner of the Behaviorists—those stern Pilgrims in psychology, who regard overt Behavior as the criterion of the human soul—we are coming upon the ANOMALIES of human conduct as if by accident, while engaged in a drive for that promised land where there are “norms” and psychometric curves for every kind of human activity. That is to say, while maintaining a mathematical ideal (worthy of the aspirations of Thomas Hobbes, seeking to put psychology on the same plane as geometry) the hosts of Behaviorism are only skirting the bogs and quagmires of anomalous, erratic conduct, side-stepping the introspective methods that would explain and control those seeps from the subconscious: the very ones that contribute the Unexpected and the Incalculable element to “humane Nature.” The misfortune is that the psychological laboratories have not detached, from their main forces, any group of trained minds to reduce these true problems of Psychology to anything like practicability, i. e. for easy communication with the real inside meaning of human conduct—in case it is at all exceptional. This is, indeed, the reason for the continued existence of a separate exploration, called Abnormal Psychology. It is, for one thing, the science that leads us to look *behind* the marks and the grades of the child, when he returns from school to the home-table, with tear-stained face and lost appetite; something has gone wrong—a bad report the cause, and a meaningless bulletin of criticism from the teacher the only help offered to the perplexed parent. . . . Then is the time that Abnormal Psychology comes into play, whatever may have been the suggestions of the Binet-Simon tests in school, or of the child’s previous exemplary behavior. But what a rudimentary psychology of the Abnormal still passes current!

For the advancement of Abnormal Psychology both Claparède and Grosz-

mann are opening the way, by showing the need. They are also filling in the gap between the mathematical conception in Educational Psychology, and the conception of something deeper, worthy of exploration, that is not mathematical, as yet. We refer to hidden wishes, sub-conscious desires, motions, mistaken prejudices on the child's part—things that John Locke warned us to pay heed to, as early as 1696—for they are the quantitatively indefinable realities of the human spirit. Of all these realities the Behaviorists are, as yet, not sharply aware. As a speaker at a meeting of the American Psychological Association wittily remarked: "The Behavior laboratory bears the sign 'All ye who enter here, check your souls at the door.'"

THE "SOUL" NOT YET PLUMBED

Outside that door, in every-day-life, the Anomalist must continue to work with the soul of the child; and it is to him that we must turn for an answer, primarily, to the genuine problems of childhood. He must study causes, not results, in education. It is he who must say: "We may not be able to do anything for you adults, but we can do something for your child to prevent you from brow-beating and shell-shocking the sensitive spirit, which you cannot penetrate with your home-made behavior tests." It is he who should acquaint parents with the conception of Lockean trauma—the idea that gave John Locke his inspiration for the phrase "association of ideas." . . . "Many children imputing the Pains they endured at School to their books, they were corrected for, so join those *Ideas* together, that a Book becomes their Aversion, and they are never reconciled to the Study and Use of them all their Lives after; and thus Reading becomes a Torment to them, which otherwise possibly they might have made the great Pleasure of their Lives." (Page 283, "Human Understanding," 3rd Edition, London 1705).

This whole terrain of the "association of ideas" (in the original "anomalous" sense, which was evidently that of Locke) is the field of the anomalist, where, pedagogy and psychology are in a fair way to meet.

Now, justifying the above statements—which sound like a digression—is the work of Addington Bruce, *Handicaps of Childhood*. This balances, by sheer human interest, the technical weightiness of Groszmann's *The Exceptional Child*; for Bruce's work drives home the conception of anomalies as part of the development of the child and fits the reader at least to sense them.

THE author of *Handicaps of Childhood* has powers of exposition of no mean order; the special powers, as it were, of the journalist who, having no deep interest at stake in what he is writing about, treats his topic as an "events-man." Thus, he is able to impart a smooth and easy-going aspect to his short chapters, devoted to such topics as I. Mental Backwardness; II. The Only Child; III. The Child Who Sulks; IV. Jealousy; V. Selfishness; VI. Bashfulness and Indecision; VII. Stammering; VIII. Fairy Tales That Handicap; IX. "Night Terrors."

Readers of *The Journal of Abnormal Psychology* can guess the contents of each chapter, but can scarcely estimate the effect of putting such data in tabloid form before parents and educators.

Bruce's *Conclusion* palpably brings us to one of the most important spheres of Abnormal Psychology,—always before the Anomalist—the sphere of the emotions. . . . “From what has been said in the foregoing pages, it is an irresistible inference that the greatest of all handicaps a child can have, short of being born hopelessly deficient, is to be born into a home where he will be exposed to mind-deadening or emotion-stressing influences—a home where he will receive neither adequate mental stimulus nor adequate moral training. Under such circumstances, so profound is the influence of the early environment, his growth to a normal manhood is impossible, unless other and more favorable influences from outside the home affect him with sufficient force to offset the home surroundings.” (P. 303).

This shows, as it were, the “reverse of the medal”: Emotional Interest as a mis-educating force. (Claparède).

AN EXCELLENT POPULARIZATION

Bruce is not complex, but very readable alongside of Groszmann: scientific anecdotes of child study lighten the pages. In pursuit of human interest, he not only tells of children that have been helped specifically by this or that physician, of this or of that school (the Freudians have the lead) but he “comes down to brass tacks” sufficiently so that the eyes of Anxious Mother are opened to the existence of SOMETHING IN THE DEPTHS of the child's life that is more worthy of attention than what appears so plainly on the surface.

It is not to be pretended that Bruce is profound. He would miss his functions if he were less journalistic. He is the Frank H. Spearman of psychology. Like Spearman, who wrote about the strategy of great railroads and captains of industry, Bruce habitually pays his compliment to all the leading figures in psychology and psychological medicine, even featuring many theories that are destined to have only a transitory “*succès d'estime*.” But, like Frank Spearman's words about each and every magnate in the railroad game, it all helps to orient the reader; and while we cannot readily think of Frank Spearman or Addington Bruce as strenuous enough to drive for a reform in his particular province, (like Claparède) or to “saw wood” with continual experiments (like Groszmann), yet the application of the journalistic style to a problem like child study, no less than to the railroad question, is of obvious utility; it keeps the public awake and aware, and open-eyed for the day of reform.

In this sense Bruce's work is a prospectus, which advertises those possibilities of child study that may be obtained by simplifying and digesting the implications of Groszmann and of Claparède.

Before taking leave of our authors, it should be said that the result of a tour of the Museum of Education with the help of these three books, should be to bring us closer to an appreciation of the growing importance of studying so-called anomalies of the child, such as dreams and the emotions—concerns that could bear even more emphasis than these authors have space to give to them.

L. H. HORTON.

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ORIGINAL ARTICLES

THE PSYCHOGENESIS OF MULTIPLE PERSONALITY¹

BY MORTON PRINCE

LECTURE I

FOREWORD

As an introduction let me say that in a previous lecture (The Unconscious, Lecture VIII) I pointed out that in a general way alteration of personality is effected through the primary organization by experience and later coming into dominating activity of particular systems of ideas with their affects, on the one hand, and the displacement by dissociation or inhibition of other conflicting systems on the other. In slighter degrees and when transient this alteration may be regarded as a mood. When the alteration is more enduring and so marked by contrast with the preceding and normal condition as to obtrusively alter the character and behaviour of the individual and his capacity for adjustment to his environment, we have a pathological condition. When the alteration is slight and affects few systems it may be easily overlooked; or when it is accompanied, as it often is, by physiological disturbances, it may be so masked by them as to be mistaken for so-called neurasthenia. It is when the dissociation is so comprehensive as to deprive the individual of memory of his previous phase of personality, or of certain acquired knowledge or other particular experiences that the personality is easily recognized as a dissociated one. When the inhibiting or repressing force that induces dissociation ceases to be effective, that is when the dissociated systems

¹This study of two cases of dissociated personality was written several years ago and was originally intended to be included in the volume published under the title of *The Unconscious* (The Macmillan Co. 1914). This intention was not carried out because of the undue size of the volume it would have entailed. It was therefore, reserved for the later publication in another volume but the study of one case is now published in advance. The lecture form is retained as a convenience.

come again into activity and repress the temporarily dominant systems, then the individual returns to his normal condition (in which he may or may not remember the dissociated state), just as a person returns to his habitual character after the passing of a mood. We may speak of the two phases—the normal and the altered one—as constituting together *multiple personality*. As these two phases may continue to alternate with one another they are also alternating personalities. The second or altered state is also sometimes called a *secondary personality*. There may be several such secondary personalities which may alternate with each other or the normal personality.

It should be noted that the formation of a secondary personality is the result of two processes, *dissociation* and *synthesis*. As a result of the first process, dissociation, systems of thought, ideas, memories, emotions and dispositions previously habitual in the individual may cease to take part in the affected person's mental processes. The influence of these systems with their conative tendencies is therefore no longer for the time being in play.

When we pass in review a large number of cases, we find that the systems of ideas, which (through the dissociating process) cease to take part in personality, may be quite various. One or more "sides" to one's character, for instance, may vanish, and the individual may exhibit always a single side on all occasions; or the ethical systems built up and conserved by early pedagogical, social, and environmental training may cease to take part in the mental processes and regulate conduct; or, again, the ideas which pertain to the lighter side of life and its social enjoyments may be lost and only the more serious attributes of mind retained. There may even be amnesia in consequence of dissociation for chronological epochs of the individual's life, or for certain particular episodes, or for certain specific knowledge, such as educational acquirements (mathematics, Greek, Latin, music, literature, etc., or knowledge of a trade or profession, and even of language). Amnesia alone, however, does not constitute alteration of personality strictly speaking; for a person may have complete loss of memory for certain specific experiences without true alteration of character. It is of important significance, as we shall see, that the dissociated or inhibited² systems may include emotions, instincts and innate dispositions.

²Dissociation and inhibition are not coextensive terms for although inhibition implies dissociation, a dissociated element may not be necessarily inhibited as it may function subconsciously or independently of the personal consciousness.

Examination of recorded cases shows too that besides mental memories, physiological functions may be involved in the dissociation. Thus there may be loss of sensation in its various forms, and of the special senses, or of the power of movement (paralysis), or of visceral functions (gastric, sexual, etc.). Dissociation may, then, involve quite large parts of the personality including very precise and definite physiological and psychological functions. We shall see examples of these different dissociations in numerous cases.

As to the mechanism by which pathological dissociation is effected, it may be well to point out here that there is no reason to suppose that it is anything more than an exaggeration of the normal mechanism by which, on the one hand, mental processes are temporarily inhibited from entering the field of consciousness, and, on the other, physiological functions are normally suppressed and prevented from taking part in the psycho-physiological economy. (For instance, the suppression of the gastro-intestinal functions by an emotional discharge.) Every mental process involves the repression of some conflicting process; otherwise all would be chaos in the mind. And every physiological process involves some repression of another process. The movements of walking involve the inhibition alternatively of the flexor and extensor muscles according as which is contracted in the movement.

This principle is conspicuous in absent mindedness and voluntary attention when every antagonistic or irrelevant thought and even consciousness of the environment is prevented by a conflicting force from entering the field of consciousness. In other words, every mental process involves a conflict and inhibition: in physiological terms a raising of the threshold of the antagonistic mental process in consequence of which it cannot function unless the stimulus be increased. This is a normal mechanism and process. The conditions which determine absolute and continuous dissociation or inhibition become the object of study.

By the second process, synthesis, particular systems of ideas with the conative tendencies of their feeling tones rise to the surface out of the unconscious and become synthesized with the perceptions, and such memories and other mental systems and faculties of the individual as are retained. Thus it may be that dispositions, sentiments and systems belonging to a particular "side" of the character—the amiable or the brutal, the unselfish or the selfish, the ungenerous or the generous, the practical or the idealistic, the literary or the business, the

religious or worldly, the youthful and gay, or the mature and serious, etc., to any side may become uppermost and be the dominant trait of the secondary personality. Or it may be that the systems of ideas, disposition, etc., belonging to childhood and long outgrown, but conserved nevertheless in the unconscious, may be resurrected and becoming synthesized with other systems form a personality childish in character. Or, again, sentiments, thoughts, dispositions, tendencies, instincts which, though intimately belonging to the individual, have been restrained, repressed, concealed from the world for one reason or another, may, being set free through dissociation from the repressing thoughts, rise to the surface and take part in the synthesis of the new personality.

In other words there is a rearrangement and readjustment of the innate dispositions and those deposited by the experiences of life which go to form personality. Some by the process of dissociation are expelled from the personal synthesis; some which had been previously expelled (repressed) by education, maturity of character, direct volition, and other processes of mental development are brought back into it.

It is obvious that when such rearrangements and readjustments have occurred the mental reactions of the individual will vary largely from what they were before. The reaction to the environment will become altered. When systems which give rise to the habitual modes of thought are dissociated, naturally the reactions of the individual will not be influenced by them but by those of the new synthesis, and the character will be correspondingly changed. Inasmuch as out of the great storehouse of the unconscious any number of combinations of systems may be arranged, it is obvious that any number of secondary personalities may be formed in the same person. As many as ten or twelve have been observed.

A study of cases which have come under my personal observation, and the reports to be found in the literature of those cases of multiple personality which have been studied with sufficient intensity and exhaustiveness, allow these general and preliminary statements, which are little more than descriptive of the facts, to be verified.³ One

³Unfortunately most of the reported cases were not studied from a genetic point of view and the reports are too meagre to afford sufficient data for a study of this kind. But in many cases the principles can be recognized. In the article "Hysteria from the Point of View of Dissociated Personality," *Journal of Abnormal Psychology*, Oct., 1906, I have given a synopsis in tabulated form of the reports accessible up to the date of publication.

of the best examples is the case of B. C. A. which I had an opportunity of studying over a long period of time, and to which reference has been frequently made. I shall first take this as the object of our study in psycho-genesis and afterwards that of "Miss Beauchamp," a descriptive account of which case has been already published.⁴

This subject has herself written at my request two introspective analyses of her own case, one by the normal personality and the other by the secondary personality. These analyses are of great value.⁵ They give different versions of the same facts in accordance with the differing memories, knowledge and points of view of the differing personalities. The second also gives an account of the claimed co-conscious life as experienced by herself and unknown to the normal personality. We cannot do better than take them as a basis for a genetic study of the case and reproduce portions of them here. In this study I have made use, in addition to this material, of a large number of personal observations extending over five years, of numerous letters and analyses written by the subject at different times in her various phases of personality, of the memories in hypnosis, in which state many subconscious and dissociated perceptions and thoughts not otherwise remembered are brought to light, and of numerous analyses of her memories made on many occasions, at the expense of many hours of labor. Other sources of information have also been made use of. This investigation has resulted in a voluminous collection of records filling several large portfolios. In making the analyses and in many of the letters the subject, with extreme frankness and in the interests of psychology has gone in great detail into and has laid bare the most intimate facts of her mental life. This is true of each of the phases of personality, so that the point of view from which the same facts were seen in different moods has been obtained. This is a matter of no small consequence as the same fact often acquires a different aspect or meaning according to the view point of the mood in which it is experienced. A large amount of data pertaining to the inner life of the subject has thus become accessible. It is obvious that data of this sort are necessary if the psychological status of any given period of an individual's life is to be related to antecedent mental experiences as etiological factors. But this sort of data is that which usually is most difficult to obtain. Our inner lives we keep hidden as in a sealed

⁴Morton Prince: *The Dissociation of a Personality*; New York; Longmans, Green & Co., 1906.

⁵Published under the title "My Life as a Dissociated Personality in the *Journal of Abnormal Psychology*"; Oct.-Nov., 1908 and Dec.-Jan., 1909.

book from the world. In all published reports of multiple personality these data are lacking, the studies dealing almost entirely with such facts only as were open to the observation of the investigator. It necessarily results from such a study of the inner life of a person living in the circle to which this subject belongs that many of the data are too intimate and personal for publication. However much one may be interested in science there is a point beyond which one shrinks from exposing one's self in print. I am, therefore, at many points very properly limited to the use of general phrases and summarizing expressions instead of explicit statements of particular facts which, I am aware, would be more satisfactory to the critic. This limitation cannot be helped, but is probably compensated for by the fact that, if it did not exist, the subject would be one whose introspective observations would be of much less value.

I will only add to this statement that the data were not collected in support of a preconceived theory or even of a working hypothesis, but only after they were gathered—in fact, after much of this material was forgotten—were they brought together and studied. It was then found that when the different pieces of evidence were pieced together they allowed of only one conclusion, namely, that which the subject herself in the main reached independently as the facts were laid bare and brought into the field of her consciousness by the means I have described.

By way of preface to the subject's introspective analyses I reproduce here the following remarks, which I wrote as an introduction to the "Life," but slightly expanded and with a few verbal changes to make the matter clearer.

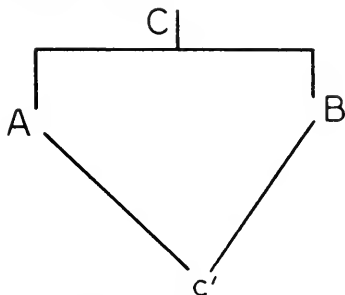
An account of the various phases of dissociated personality written by the patient after recovery and restoration of memory for all the different phases cannot fail to be of interest. If the writer is endowed with the capacity for accurate introspection and statement such an account ought to give an insight into the condition of the mind during these dissociated states that is difficult to obtain from objective observation, or, if elicited from a clinical narration of the patient, to accurately transcribe. In that remarkable book, *A Mind that Found Itself*, the author, writing after recovery from insanity, has given us a unique insight into the insane mind. Similarly the writer of the following account allows us to see the beginnings of the differentiation of her mind into complexes, the final development of a dissociated or multiple personality, and to understand the moods, points of view, motives, and dominating ideas which characterized each phase. Such an account could only be given by a person who has had the experience, and who has the introspective and literary capacity to describe it.

The writer in publishing, though with some reluctance and at my request, her experiences as a multiple personality, is actuated only, as I can testify, by a

desire to contribute to our knowledge of such conditions. The experiences of her illness—now happily recovered from—have led her to take an active interest in abnormal psychology and to inform herself, so far as is possible by the study of the literature, on many of the problems involved. The training thus acquired has plainly added to the accuracy and value of her introspective observations.

A brief preliminary statement will be necessary in order that the account as told by the patient may be fully intelligible.

The subject was under my observation for about four years. When first seen the case presented the ordinary picture of so-called neurasthenia, characterized by persistent fatigue and the usual somatic symptoms, and by moral doubts and scruples. This condition, at first unsuspected, was later found to be a phase of multiple personality and was then termed and is described in the following account as state or personality A. Later another state, spoken of as personality B, suddenly developed. A had no memory of B, but the latter had full knowledge of A. Besides differences in memory A and B manifested distinct and markedly different characteristics which included moods, tastes, points of view, habits of thought, and controlling ideas. In place, for instance, of the depression, fatigue, and moral doubts and scruples of A, B manifested rather a condition of exaltation, and complete freedom from neurasthenia and its accompanying obsessional ideas. A and B alternated during a long period of time with one another. After A, for example, had existed as a personality for a number of hours or days she changed to B, and vice versa. After the first appearance of B it was soon recognized that both states were only fragments, so to speak, or phases of a dissociated personality, and neither represented the normal complete personality. After prolonged study this latter normal state (c) was obtained in hypnosis, and on being waked up a personality was found which possessed the combined memories of A and B, and was free from the pathological stigmata which respectively characterized each. This normal person is spoken of as C. This normal C had, therefore, been split and resynthesized into two systems of complexes or personalities, A and B. Leaving out for the sake of simplicity certain intermediate hypnotic states, A and B could be hypnotized into a single hypnotic state which was a *synthesis* that could be recognized as a complete normal personality in hypnosis. All that remained to do was to wake up this state and we had the normal C. This process could be reversed and repeated as often as desired. That is C could be split again into A and B and then resynthesized in c and awakened to become C again. This relationship may be diagrammatically expressed as follows:



The various traits which characterized and differentiated the different personalities will appear in the course of this genetic study. With this introduction we will proceed to the latter.

THE CASE OF B. C. A.

The first of the accounts above mentioned by the *normal* personality, C, written after recovery, is in the form of a letter. She had complete memory for both her phases A and B. It will be noticed in passing that this normal self speaks of the phases A and B as herself, transformed to be sure, but still herself in different "states." "As A, I felt" so and so, "as B, I felt" thus, etc. On the other hand, the secondary personality B, in her account, always refers to the other personalities as distinct personages, and uses the third person "she" in speaking of them. In this matter of differentiation of personalities B was very insistent, maintaining, as has been frequently noted in other cases, that she had no sense of identity of her own self-consciousness with that of the others. "I am, at any rate, a distinct personality," she remarks. In her consciousness there was no feeling that the self-consciousness of C and A was identical with her own, but the contrary. This frequent phenomenon presents a standpoint from which the problem of the "I" may be studied. What is it that determines the self-consciousness of an ego? We are not concerned with this old question at present, but it is worth noting that cases of dissociated personality offer a favorable material for the solution of the problem.

The following extracts from the accounts by "C" and "B" have been taken as a basis for our analysis which will further attempt to coordinate the two accounts and to clarify the psychological development of the case.

FROM ACCOUNT GIVEN BY THE NORMAL PERSONALITY C AFTER
RECOVERY

MY DEAR DR. PRINCE,

You have asked me to give you an account of my illness as it seems to me now that I am myself and well; describing myself in those changes of personality which we have called "A" and "B."

It is always difficult for one to analyze one's self accurately and the conditions have been very complex. I think, however, that I have a clear conception and appreciation of my case. I remember myself perfectly as "A" and as "B." I remember my thoughts, my feelings, and my points of view in each personality, and can see where they are the same and where they depart from my normal self. These points of view will appear as we go on and I feel sure that my memory can be trusted. I recall clearly how in each state I regarded the other state and how in each I regarded myself.

As I have said, I have now, as "C," all the memories of both states (though none of the co-conscious life which, as B, I claimed and believed

I had). These memories are clearly differentiated in my mind. It would be impossible to confuse the two as the moods which governed each were so absolutely different, but it is quite another thing to make them distinct on paper. I have, however, been so constantly under your observation that you can, no doubt, correct any statement I may make which is not borne out by your own knowledge.

I am, perhaps, of a somewhat emotional nature, and have never been very strong physically though nothing of an invalid. I have always been self-controlled and not at all hysterical, as I would use the word. On the contrary, I was, I am sure, considered a very sensible woman by those who know me well, though I am not so sure what they may think of me now. I am, however, very sensitive and responsive to impressions in the sense that I am easily affected by my environment. For instance, at the theatre I lose myself in the play and feel keenly all the emotions portrayed by the actors. These emotions are reflected vividly in my face and manner sometimes to the amusement of those with me and, if the scene is a painful one, it often takes me a long time to recover from the effect of it. The same is true of scenes from actual life.

Before this disintegration took place I had borne great responsibility and great sorrow with what I think I am justified in calling fortitude, and I do not think the facts of my previous life would warrant the assumption that I was naturally nervously unstable. It does not carry great weight, I know, for one to say of one's self,—I am sensible, I am stable, I am not hysterical,—but I believe the statement can be corroborated by the testimony of those who have known me through my years of trial. The point I wish to make is that my case shows that such an illness as I have had is possible to a constitutionally stable person and is not confined to those of an hysterical tendency.

A year previous to this division of personality a long nervous strain, covering a period of four years, had culminated in the death of one very dear to me—my husband. I was, at the end of that period, in good physical health, though nervously worn, but this death occurred in such a way as to cause me a great shock, and within the six days following I lost twenty pounds in weight. For nearly three months I went almost entirely without food, seemingly not eating enough to sustain life. I did not average more than three or four hours' sleep out of the twenty-four, but I felt neither hungry nor faint, and was extremely busy and active, being absorbed both by home responsibilities and business affairs. The end of the year, (5 years after the beginning of my husband's illness,) however, found me in very poor health physically and I was nervously and mentally exhausted. I was depressed, sad, felt that I had lost all that made life worth living and, indeed, I wished to die. I was very nervous, unable to eat or sleep, easily fatigued, suffered constantly from headache, to which I had always been subject, and was not able to take much exercise. The physician under whose care I was at this time told me, when I asked him to give my condition a name, that I was suffering from "nervous and cerebral exhaustion."

It was at this time that the shock which caused the division of personality occurred [resulting in Period III].

Although this last statement is true so far as concerns the complete dissociation of personality which resulted in the birth of an inde-

pendent alternating personality, the first beginning of the genesis of that personality can be traced back to a far earlier period when she was about twenty years of age, that is to say *nineteen years before the final cleavage*. *These beginnings were an embryonic cluster or complex of rebellious ideas, "floating thoughts, impulses, desires, inclinations" and intense feelings which came into being at this early period in consequence of an emotional trauma.*

[It should be noted that the term "complex" is used in this study, not in the Freudian sense, but with the older and more comprehensive meaning of an organized *system* of ideas, affects, and innate and acquired dispositions.]

I propose to trace in the course of this study, first, the gradual growth by successive syntheses of this rebellious cluster with other idea-clusters during a period of fourteen years. This period I shall call Period I.

Second, its incubation, organization and segregation from the main personality during a second period of five years as a fairly well defined complex known as the *B complex*. This period I shall call Period II.

Third, the culmination of the incubating process and, as the result of an emotional shock, final bursting into flower of the B complex as the B personality. This period I shall call Period III.

Fourth, the reversion to the original personality, but now one so disintegrated, shorn and shattered by the segregation of the autonomous B complex and of certain instincts as to be a so-called secondary disintegrated personality, A.

Fifth, the alternation of these two strongly contrasted abnormal personalities.

Finally, the reintegration of the two abnormal personalities into one normal original personality, C.

In following the evolution of the personalities my main purpose will be to bring to light the psychological forces which brought about the disaggregation, on the one hand and the synthetic construction of the new personal systems, on the other.

The following characterization of Periods will be convenient for reference.*

Period I. From wedding to beginning of husband's illness (14 years) characterized by a group of rebellious ideas.

*The division into periods follows that given in the second account by B.

- Period II. During husband's illness (4 years) and one year following (5 years), characterized by *B complex* and terminating with shock.
- Period III. Beginning with shock, characterized by *B personality* and terminating one month later by another shock in
- Period IV. Personality A plus *B complex* lasting one week, followed by
- Period V. Characterized by alternations of A and B personalities and lasting several years until reintegrated in original normal personality, C.

All these changes from Period I to IV inclusive were caused by emotional shocks awakened by a common factor in a closely associated situation. In period IV the A personality had no amnesia for personality B. This amnesia developed in Period V.

PERIOD I

The writer C in her account passes over the early first period, although she remembers clearly the historical facts and has given a very precise description of them in the many analyses which have been made and recorded. In the second account,⁷ written in the secondary B phase of personality, she recognizes the embryonic emotional complex of this first period, and its genetic relation to the later *B complex*, and to her own still later developed *B personality*. "This complex" she wrote, "it seems to me is the same, though only slightly developed, as that which appeared later and is described as complex B. In trying to explain this condition, which it seems to me was the first start of what ultimately resulted in a division of personality, I will divide the time into periods, and I will call this period I." (This same division into periods I have thought it well to follow.) She also identified the ideas of this early complex with ideas and feelings which she still entertained and which formed a marked characteristic of her own dissociated (B) personality.

For the sake of clearness and simplicity of phraseology it will be well from now on to speak of the subject when in the dissociated B state simply as B, and when united in the normal state as C. In this way, as C points out, we shall avoid constant repetition and circumlocution in such phrases as, "when the subject was in the B state," etc. You must not, however, be misled by the connotation of terms and read into this nomenclature more than the psychological facts warrant,

⁷Journal Abnormal Psychology, Vol. III, No. 5. P. 311.

or make distinctions of personality which transcend in any way psychological laws. Dissociated and multiple personality are not novel freak phenomena, but are only exaggerations of the normal and due to exaggerations of normal processes, and it is for this reason that they are of interest and importance. For, being exaggerations, they accentuate and bring out into high relief certain tendencies and functional mechanisms which belong to normal conditions, and they differentiate mental processes, one from another, which normally are not so easily recognized.

They are caricatures, so to speak, of the normal. In one respect they may be likened to the staining of an anatomical specimen prepared for the microscope by which the various anatomical structures are brought out into strong contrast with one another and easily differentiated, like the boundaries of countries on a colored map. Without the staining all would have a homogeneous appearance and differentiation would be difficult. So, though a secondary personality is in one sense but a phase of the whole personality, it is characterized largely by an accentuation and determination of particular constituents to be found in the given normal everyday personality, and by the subordination or repression of others, both being effected by the exaggeration of the normal processes of dissociation and synthesis. In such a secondary personality these constituents and processes are easily recognized though they may be hidden under normal conditions. In saying that a secondary personality is a phase of the whole personality the latter term—whole personality—must be taken in the sense of including all the past experiences of life which have been organized, deposited and conserved in the unconscious, and all the instincts and innate dispositions of the individual. These past experiences form, as we have seen,⁸ a storehouse of formative material which, for the most part, under ordinary conditions, may lie dormant though potential; but any elements of this material may, under special influences, be awakened to activity and, uniting with particular constituents of the normal everyday personality, take part under the urge of their own instinctive impulses and dispositions in the formation of a new personality. The remainder of the normal personality then becomes submerged and dormant in the unconscious.⁹

⁸The Unconscious. Lecture IX.

⁹By the "unconscious" is to be understood the neurograms, or systems of acquired residua (brain dispositions), plus the innate psycho-physiological dispositions with which they are organized. By these systems, according to the theory of memory, experiences are conserved. They may lie dormant, or they may become stimulated into activity. In the latter case they may function subconsciously, or their conscious equivalents may enter consciousness.

To return to the evolution of the B personality. If this final phase be correctly traced back 19 years to the early antecedent rebellious complex above referred to, we shall see that the evolution of multiple personality in this case passed through several successive stages and was of slow growth. Speaking generally, it may, indeed, be ascribed, primarily, on the one hand, to the disruptive or dissociating effect of continuous *conflicts* between the opposing impulses of innate dispositions and instincts (emotions), and, on the other, to the gradual synthesization of the components of personality repressed by these conflicts into the subconscious. The secondary incubation of these repressed and other deposited experiences of life followed, with the final setting free of all this formative material, when fully matured, by the force, awakened by a trauma, of the conative emotional impulses belonging to it. The analogues of these phenomena and mechanisms are observed in sudden religious conversion which in principle is an alteration of personality.¹⁰

All the historical evidence at hand, derived from searching investigation, goes to show that at the early period to which I have referred (period I) the subject received an emotional shock, "which," B wrote, "it seems to me, as I look at it now, resulted in the first cleavage of personality. This emotion was one of fright and led to rebellion [in the form of rebellious thoughts] against a certain condition of her life, and formed a small vague complex [of thoughts and emotions] which persisted in the sense that it recurred from time to time, though it was always immediately suppressed."¹¹ And this vague complex of rebellious thoughts necessarily soon gave rise to and included other "floating thoughts, impulses, desires, inclinations," all of which the subject suppressed or endeavored to suppress during a long period of years. "This complex," she adds, as quoted above, "it seems to me, was the same, though only slightly developed, as that which appeared later, and is described as complex B." (P. 316).

The "shock" when more deeply analysed proved to be the excitation of certain emotions which, besides a mild degree of fright, were intense repugnance or disgust, and another affect which we will term X. The emotion of repugnance was so intense as to require considerable fortitude to withstand and gave rise to much agitation. It ac-

¹⁰Prince. *Jour. Abnormal Psychology*. Vol. I, No. 1, 1906. Also, *The Dissociation of a Personality*, 2nd ed. Chap. XXI.

James. *Varieties of Religious Experiences*.

¹¹I. e., "Tried not to think of it"; "put it out of her mind as a disagreeable fact."

accompanied a cluster of "rebellious" ideas awakened by the realization of an unexpectedly disagreeable situation and relation. This cluster I shall call the *rebellious complex* to distinguish it from the later B complex into which it became constellated. This rebellious complex with the emotion of repugnance (instinct of repulsion) was of necessity frequently excited by the conditions of life and, therefore, of frequent recurrence, after the fashion of an obsession. After the first shock the fright naturally subsided, for one reason, from habituation to the conditions. The X affect, never experienced before, from the very first was repressed by the inhibiting force of the more intense emotion of disgust.¹² Fear also was involved in this repression, for there was a conflict between the opposing forces of conflicting emotions; and in such a conflict—as, for example, between fear and anger—the stronger tends to repress its antagonist and whatever it conflicts with. Consequently the recurring rebellious complex was habitually accompanied by repugnance alone. The exact constitution of this rebellious complex I am not at liberty to mention. It may have been a matter of mother-in-law, or of social arrangements, or particular duties and responsibilities, or something else—it does not matter and it is not necessary to say. It was a shrinking from a particular condition of her life. It was certainly not a wish unless this shrinking and "kicking against the pricks" can be twisted into its opposite as a wish to be free from the objectionable condition. Still less was it a morally unacceptable or intolerable wish, being just the opposite; for both the rebellious thoughts and the wish to be free from the condition objected to were acceptable and justified to herself in her mind, and, in her secret thoughts at least, tolerated as natural and reasonable¹³ Nevertheless, as B. affirms, the rebellious thoughts were put out of mind, as of a disagreeable fact, as they arose from time to time; but this was only from a sense of duty in consideration of responsibilities undertaken. I could make this clearer if I were at liberty to enter into the details of these rebellious thoughts. Her life in every other respect was an unusually happy one, surrounded by all that one should desire, and included a devoted husband whom she loved, admired and respected. For these reasons alone she felt it a duty to suppress all expression of her rebellious feelings.

¹²Instinct of repulsion (McDougall).

¹³Nor were they the reaction to or the expression of a previously repressed sexual wish as any such wish would have met no conscious resistance. It is easy to see in the light of all the facts that, given a certain change in the conditions, or point of view, there would have been no shock and no rebellion.

The main point, from the point of view of psychogenesis, is that at this early stage we have constantly recurring conflicts between the conative forces pertaining to emotions linked with sentiments of duty, loyalty, and affection, on the one hand, and those pertaining to the rebellious thoughts with corresponding desires, impulses, etc., reinforced with the emotion of repugnance, on the other. The former always won and the latter were inhibited or repressed into the unconscious. That such constantly repressed thoughts with their strong feeling tones should be conserved in the unconscious was a psychological necessity, and also that they should arise into consciousness from time to time like an obsession whenever stimulated by environmental conditions and personal. I may simply cite the two following simple examples.

The subject, governed by the maternal instinct, naturally loved to take care of her baby and "make things for him to wear, and fuss over them"; and yet there were "floating thoughts" of an opposite character which later, as will appear, emerged and became conspicuous in the B complex and B personality. "She was very fond of her father-in-law and did everything to make him happy," and yet there were other thoughts which conceived of him as a "fussy old bother." These again were represented later in the loss of sentiments of affection and in the point of view of the B phases. There was no real dissociation and doubling of consciousness; these conflicting attitudes and tendencies were, at least in the beginning until the later period of stress and strain when they eventuated in corresponding action, merely evanescent thoughts, wishes and impulses which easily passed out of mind, or an undercurrent of thought such as all of us have more or less.

Later, when they became more insistent and persistent, they had to be repressed by an effort of will.

Then it followed that C, conscious of these contrary impulses, reproached herself for them, thought herself wicked to have them, and when they became insistent repressed them. Their intrusion into consciousness was probably favored by a considerable degree of neurasthenia, for when she was ill they were more frequent and obtrusive, while with good health and happiness they disappeared, as is the case with all obsessing ideas.

The occurrence of such contrary impulses would probably have been of no account and nothing more would have been heard from them, as in the case of ordinary mortals, if it had not been for a

period of stress and strain which she was destined to undergo. As it was, the awakening of these contrary thoughts and impulses was fraught with a danger to the psychical unity, a danger that actually materialized, namely: as these conflicting impulses, being also rebellious against the conditions of life, were constantly awakened contemporaneously with the specialized frequently recurring "rebellious complex," the whole tended to become synthesized into a large complex which later, during the second period of stress and strain, became in turn the nucleus of a still larger complex (B). During this latter period, as we shall see, like the forces of a growing political revolution, the rebellious thoughts and impulses increased in number, frequency and intensity, until there were times when they acquired the mastery in the conflicts and repressed the previously opposing thoughts of duty, affection, etc., and dominated the personality. The effect of such intense conflict was to cause by repression a rift in the personality, i. e., to dissociate large system of ideas, (with their emotions) from other systems. All this will appear as we go on.

There is another point which it is interesting here to note. The secondary phase B looking back recognizes (i. e., has a sense of awareness) that the "rebellious thoughts" and the various contrary impulses were herself. "I was the rebellion;" "I think of the rebellion as myself;" "I was the rebellion which she kept to herself;" "The first complex formed a something I am;" "I think I am made up of all the impulses which began to come then;" "It seems to me, as I think of it now, that I was always there—sometimes more, sometimes less—in the form of conflicting impulses." In these and similar phrases B, over and over again, in numerous analyses at widely separated intervals, identifies these early conscious processes with her own individuality. Nevertheless, "I was not an *I* then, you know," she explains, "but to understand what I write you will have to call me so. I remember them now as my thoughts, but as that time I never thought of myself as a self." "I never thought, 'I' do not like this or that then; it was like an impulse in the other direction." Let it not be forgotten, then, that at the beginning the rebellious complex and impulses were not synthesized and segregated as an ego. Nevertheless, in fact, whenever she attempts to describe the early rebellious complex and the impulses she drops into the mode of saying, "I felt so and so," and finds herself obliged to use this personal pronoun when thinking of these past thoughts, and the same is true when she speaks of the more fully developed subsequent B complex.

You will say that there is nothing particularly remarkable or unusual in this. We all think of our past thoughts as our own. *But the unusual thing is that B—the subject in the B phase of personality—does not think of C's other thoughts or conscious experiences as her own.* In fact she persistently refuses to recognize these others as hers. She has no feeling of their having belonged to her own consciousness. "They were not my thoughts," she says. This is true of this other content of the conscious life of the early first period as well as of the later periods when the B complex and the B personality appeared. "*She liked,*" such and such a thing; "*I didn't!*" "*She thought,*" so and so; "*I didn't,*" referring respectively to the thoughts of the dominant consciousness and the contrary thoughts. "Yet in referring to the *B complex*," she writes of the second period (p. 315) "I find myself continually saying 'I,' it is difficult not to do so. This, I think, must show the intimate relation between the two. I think of the B complex and I find I think of it as myself, although I do not think of A and C as myself, and they do not seem to be my own personality."

This feeling by a secondary personality that certain conscious experiences belong, or belonged, to her own personal consciousness or ego and that others do not, or did not, belong is a common phenomenon in such cases and is of great significance. It is a phenomenon which justifies the inference that the relation which one system of ideas bears to that which we call the ego is different from that of the other system; it is a phenomenon, too, which must be taken into account in solving the problem of the ego. When we study the records of cases of multiple personality we find as a frequent observation that the secondary personality distinguishes between the conscious experiences which belong to itself and those which belong to the principal personality, and to other secondary personalities, if more than one. This differentiation is based upon the feeling of self-consciousness being attached to the former and not to the latter. It is not, therefore, simply a matter of the experiences occurring at different chronological epochs. Indeed the two different sets of experiences may be synchronous, one being conscious and the other coconscious.

I have passed over a question which is sure to be asked: Why did the unexpected situation, whatever it was, occasion the "shock" and the rebellious complex? I may say frankly that the situation was not one which would induce such a disastrous effect in the ordinary

individual. The answer is to be found in the principle of settings which give meaning to ideas.¹⁴ Every idea over and above the sensory images which take part in its content has meaning; and the meaning is determined by antecedent experiences (thoughts, perceptions, feelings, etc.) with which it is associated, i. e., in which it is set. An idea of a particular individual, for example, has one meaning for one person and another meaning for another according to the associated mental experiences of each. These experiences form the setting or context which determines the meaning, point of view, and attitude of mind towards any given object or situation presented to consciousness. Whenever an emotional "shock" (one that is not a simple instinct reaction) occurs, this setting of antecedent experiences, organized with emotions, behaves as a sort of psychological torch which some later experience sets aflame, so to speak, as an emotional shock. It reacts in accordance with the emotions (fear, disgust, etc.) which the "meaning" includes. Now analytical investigation revealed settings to the "situation" dating in part from early childhood and in part from later experiences. An attitude of mind, therefore, already existed which was ready to react with the emotions (fear and disgust) which were excited by the meaning of the situation. It is easy to see, in the light of the actual facts, that if a certain factor of the situation had been altered, without altering the situation itself, its meaning would have been altered, i. e., it would not have awakened the setting built up by the experiences of life, and would not have excited the emotional response (shock) that ensued.

DISSOCIATION

But the organization of an emotional complex was not the whole effect of the shock. In addition, if the memories of B can be trusted—and I believe they can—there resulted in a minor degree a cleavage or dissociation of personality. This was not so pronounced as to give rise to noticeable pathological manifestations, but apparently sufficient to make at least a line of indenture, so to speak, which afterwards was easily broadened and deepened into a complete dissociation. This is not easy to demonstrate at this late date, but there are certain facts that have some evidential value.

In the first place, according to the evidence, there developed a tendency in what we have called the rebellious complex to take on

¹⁴Prince: *The Unconscious*: Lecture X; also, *The Meaning of Ideas as Determined by Unconscious Settings*, Jr. *Abnormal Psychology*, Oct.-Nov., 1912.)

independent activity, or an automatism after the nature of an obsession, outside the domain of the will and self-control. No amount of reasoning or of self reproach sufficed to change the point of view. Like an obsession it would not down and recurred automatically.

In the second place, it seems, according to B's memories, that the activity of the rebellious complex of ideas began to take place to a certain extent outside the focus of the attentive consciousness, in the sense that the personal consciousness was not conscious or aware of their presence. This means that at times when the ideas in question were not in consciousness, and therefore might be supposed to be dormant in the unconscious, they recurred nevertheless and were in sub-conscious activity, i. e., were coconscious. This statement is based upon the interrogation of B who to the best of her memory thought that the "rebellious ideas were split off and went on by themselves while the subject C was thinking of other things, without her being aware of them." "They were coconscious as I know it now."

Too much weight should not be laid upon memories of this kind after such long intervals of time, and I would not be understood as doing so; but that the memories of this secondary personality may be given their just value it should be explained that, like some other secondary personalities, B's memory embraces not only the mental states (thoughts, perceptions, feelings, etc.,) of the principal personality which were within the focus of attention, but those which were in the fringe or margin of awareness and those which were entirely outside, i. e., fully subconscious. This has proved to be the case by numerous test observations and experiments. B might, therefore, remember split off (coconscious) rebellious states if they existed. One reason for this enlargement of the field of memory of this phase of personality is that besides being an alternating personality¹⁵ she is a co-conscious personality. But this is another story which we shall have to postpone for the present.

In the third place, the constant invasion of the field of the personal consciousness by the contrary impulses, which I have already spoken of, suggest, if they do not indicate, a certain degree of automatic activity arising from the unconscious and dissociated from the rest of the conscious field. In the light of what has already been told and of later developments, to be described in the next lecture, the inference assumes a high degree of probability that these impulses

¹⁵I use the present tense as more convenient although I am speaking of a past condition.

were manifestations of ideas and feeling tones belonging to an earlier period of life—childhood or girlhood—which had been conserved in the unconscious and which now erupted into the field of the personal coconsciousness.

I do not want to make too much of these early tendencies to dissociation nor is the matter important. For historical comprehension, however, it is desirable that the facts should be mentioned for, if our interpretation be correct, they were evidently steps in the evolution of the final disintegration.

Thus matters went on during this first period, covering a span of 14 years; sometimes the rebellious complex, enlarged and constellated with conflicting thoughts, desires and impulses, recurred with frequency, and sometimes they remained dormant for considerable intervals, the state of general health apparently often being the determining factor.

LECTURE II

THE EVOLUTION OF THE B COMPLEX

PERIOD II

At then end of the 14 year span—when the *second period* begins—the subject “received a great shock in the sudden illness of her husband. This illness was of such a nature that she knew no complete recovery was possible and that death might result at any time.” (P. 316). This second shock aroused once more the emotion of fright, and the old rebellion and a certain apprehensiveness, a trait which is inherent to a marked degree in her character. During the following four years which covered the illness of her husband she was almost literally torn to pieces mentally by this apprehensiveness—always anticipating the inevitable hanging over her.

After the first two weeks, when her husband’s temporary recovery took place, the same old rebellious complex returned with intensified force as the condition that gave rise to it returned. But she repressed all expression of it, resolved that no one should guess her secret because she did not wish to give pain to another. So she kept her secret to herself, and what she kept to herself became the *beginnings* of a new personality. “Then came the nervous strain of sorrow, anxiety, and care, and the inability to reconcile herself to the inevitable. This nervous strain continued for four years. C’s life during this time was given up entirely to the care of her husband;

she tried to live up to her ideal—which was a high one—of duty and responsibility, and always having the sense of failure, discouragement and apprehension." (P. 316). Necessarily she was cut off from the social world of gaiety by the care that devolved upon her or, considering her temperament, thought she was. A person of less intense feeling and governed by pure intellect quite likely might have reasonably arranged her life so that she could have both given all the care she wished to the invalid, on the one hand, and participated in the pleasures of social life, on the other. But, like many anxious wives and mothers whom all physicians see, her anxiety and feelings were too intense for such cool reasoning, her mind became single tracked and she shut herself off from the world she loved. Consequently, during this period of stress and strain the old rebellious complex not only became intensified and more persistent, but also became enlarged and systematized with a still larger cluster of rebellious thoughts. To the old rebellion there was now added a rebellion against the hardness of fate which was about to cheat her out of the happiness which belonged to her, and still more against the new conditions of life as she found them. This is what the incurable illness of her husband meant to her.

She rebelled bitterly, [B writes in a letter;] she *could* not have it so and it *was* so. No one knew what his illness was and she bent every energy to conceal his true condition. She blamed herself for his illness [in her ignorance of the pathology of disease], and after a time she began to have that sense of being double. More than anything else she wanted to be happy; she saw all happiness going and she could *not* let it go—it *must* not—she *would* be happy, and she *couldn't*. It was a fight with herself all the time. We were A and B then just as much as we are now. The part that afterwards became A doing all that a devoted conscientious wife could do, determined that her husband should never miss anything of love and care; and the part that afterwards became B rebelling against it all, not willing to give up her youth, longing for pleasure, and above all for happiness. To be happy, that was always the cry, and it was not possible.

It was a longing for conditions which in her mind seemed essential, and she could not accept the conditions as they were. "It was a rebellion, a longing for happiness, a disinclination to give up the pleasures of life which the conditions required; and there was a certain determination to have these pleasures in spite of everything, and this resulted in a constant struggle between C and this complex." It was that inability, which is so common and causes so much mental disturbance and unhappiness in so many people, to reconcile and ad-

just oneself to the actual situation of one's life and accept it. And here, in the case of B. C. A., we recognize in the center of the rebellion of this second period of stress and strain, the same thoughts which had cropped up evanescently during the first period but now become more intense and persistent, more disturbing and the fundamental cause of the inability to adjust herself to the situation.

These thoughts, however, were not tolerated by the subject and were put out of mind and *repressed into the unconscious by her right-mindedness*. It thus became a matter of conflict between the light-hearted gay sentiments and temperament of inexperienced youth which, in ignorance of life, finds it difficult to accept its serious responsibilities, and the sentiments of honor, duty, and affection which were the dominating traits. These facts are too intimate to go into in greater detail, but each one will probably recognize in himself some such conflicting desires and tendencies.

This is the place to point out certain major traits in the character of B. C. A. which enable us to recognize more clearly the source of the conflicting impulses and help to make intelligible their uprushes. There were two strongly marked elements in her character which had always been noticeable and which, given the appropriate conditions, were almost bound to come in conflict. B. C. A. during all her girlhood days and early married life was noted for her happy, buoyant, lively, light-hearted disposition. She was ready at all times for pleasure and could not bear to give it up, and she had an unusually intense desire to be happy; she loved happiness and wanted happiness, and when happiness dominated, as it generally did in a person of such a disposition, she was filled with the "joy of life." Responsive to her environment, when her surroundings were sympathetic all the joy and mirth of her own personality was given out and reflected upon others. She was of an intense nature in that she felt all the anxieties, sorrows, and joys of life with great and equal intensity. But it was joy and happiness which appealed to her as the one thing she must preserve. This was one of her character traits.

On the other hand the second trait was equally strong, namely, unreasonably high moral ideals, so high even in the little every day affairs of life that only a strong stern fanatic or ascetic could live consistently and perpetually up to them; she was intensely conscientious and high-minded with an almost inordinate sense of honor and duty; and there was also an overweening pride in her rectitude and moral

ideals which sometimes seems to have transcended common-sense; and there was pride in her pride. Reserved and rather unapproachable to strangers she was affectionate to relatives and intimates.

These two traits of character if analyzed would be seen to be two great strongly contrasted systems of ideas and sentiments¹⁶ with their respective emotions and feelings. They formed two sides to her personality, and the conflicts that ensued could be said to have been between the two sides.

To say that these two traits or groups of traits—love of the joy of life and conscientious devotion to duty—were combined in one person is not of course to mention anything out of the ordinary. What was out of the ordinary was the intensity with which each existed. Now that she has recovered from her illness and has reverted to the normal synthesized personality these traits are still easily noticeable. None but a person of unusually strong, fixed character, capable of holding an ideal continuously in mind, subordinating all else, could have downed the cry for happiness and lighter pleasures of life. When we come to the secondary split personalities we shall see that the splitting was between these two traits; the elements of one gathering about itself associated elements, formed one personality with corresponding reactions to the environment, and the elements of the other in similar fashion formed the other personality. Thus stronger conflicts arose.

The recognition of mental conflicts as disturbances of personality and determinants of conduct is as old as literature itself. They have been the theme of poets, dramatists and fiction writers of every age. It has remained for modern dynamic psychology to study and determine with exactness the phenomena, discover the mental mechanisms involved and formulate the laws. One school, the so-called psycho-analysts, claims to find in practically all conflicts, a very complicated mechanism involving repression, unconscious processes (generally a sexual wish for the most part from infantile life) a "censor," a compromise, conversion and disguise of the repressed factor in the form of a psycho-neurosis, or other mental and physiological phenomena, substitution, etc. I have no intention of entering into a

¹⁶By a *sentiment* is meant an idea about which are organized emotional instincts such as anger, fear, love, etc. The instinct through the discharge of its emotion provides the impulsive force which carries the idea to fulfillment. Thus a sentiment is more than an idea, it is idea plus emotion or feeling without which the idea would be relatively, if not absolutely, inert, lifeless.

discussion of the correctness of such mechanisms. The sole point I wish to make is that, even if so, to find such mechanisms and results to be universal is the *reductio ad absurdum* just as it would be to find that a conflict between a policeman and a resisting rioter is always carried out by a process which is manifested by a black eye and cracked skull, arrest, trial and conviction of the rioter. The process of the physical conflict may be simple or complex and be manifested and terminated in many ways. It may be carried out by and result in simple dissociation of the rioter from the crowd and sending him home about his business.

So with mental conflicts which may be manifested in many ways and have various results. I shall reserve for a later discussion some of these ways and results. One way and mechanism is, as in the latter example of the rioter, the simple repression and dissociation of the weaker factor resulting in the domination of the stronger, and the determination of conduct according to the impulses and tendencies organized within the mental system that has gained the ascendancy. But in maintaining social law and order we may have to deal, not with a single rioter, but with a mob or organized rebellion. Then the repression of the uprising may bring into action more memories and more systematized forces and may result in the repression of organized factions and an alteration of the social system. So mental conflicts may involve large systems and result in extensive rearrangements and repressions; in other words, an alteration with dissociation of personality. This was the mechanism and result in the case now under examination.

The conflicts were between the impulses or conative forces discharged from the emotions pertaining to youthful sentiments of pleasure and joy and play and ideas with exalting pleasure-feeling tones, all constituting wishes for the pleasures and happiness of youth—conflicts, I mean, between these forces and those of ethical sentiments of duty, with others involving the emotions of affection, anxiety, sympathy, admiration, and depressing pain-feeling tones. *For the time being, at least, the latter won and the former were repressed.* But they were still there, conserved in the unconscious, ready to spring to life in response to a stimulus at any favorable opportunity when the repressing force of the will power was weakened by stress and strain. So we see that the conflicting wishes and impulses which jarred and threatened the mental equilibrium of the subject were, after all, only

impulses or incursions from the unconscious of repressed antecedent mental experiences (wishes and conative tendencies) which were elements in the normal character.

Thus it came about that the original complex of rebellious thoughts against a *particular* condition had become slowly enlarged into a rebellion against *general conditions*, and *constellated with a number of specific wishes for pleasure (which were incompatible with her life) and the corresponding impulses into a still larger complex.*

It is this latter that we have called the *B complex*.

It had become evolved and organized out of the original "rebellious" complex as its nucleus by receiving successive accretions from later rebellious ideas and wishes in conflict with the personality, much as the pearl in the oyster grows by successive accretions.

From one point of view it was a highly developed "mood."

It was still under control but later, as we shall find, it was destined to assume autonomous activity and play a dominant role.

"C was still conscious of these thoughts," [B wrote in her account,] but they represented to her the selfish and weak part of her nature and she tried to suppress them; tried to put them out of her mind but they still persisted, and she was always to a greater or less extent aware of them. There was no lack of awareness and no amnesia. As the months and years went on the sorrow and anxiety of the C group increased, and the conflicting thoughts and *rebellion* of the B group increased. C was ashamed of the latter and always tried to suppress such thoughts as they arose. If during those years anything happy had come to C the formation of this rebellious complex would, I believe, have been retarded, perhaps stopped altogether, but nothing pleasant happened; it was all grief, and everything went wrong.

Notwithstanding the continuing stress and strain and lack of joy all probably would have gone well if C's husband had recovered and she had retained her physical health. Returning to her normal life, she would have been only one more of those who have lived through a period of anxious perturbation. But unfortunately, as it happened, "C's husband died suddenly away from home, the one thing she had [dreaded and] felt she could not bear." She received the news over the telephone.

She did not recover [B states] from the shock and became more and more nervous, was very much depressed, easily fatigued, suffered constantly from headache, and was possessed by all sorts of doubts and fears, reproaching herself for things done and undone. She also overtaxed her strength in attending to business matters. (P. 317).

C's physical health immediately and suddenly gave way. Her own account, already given, goes more into detail and lets us see the extent to which she was handicapped by physical and mental ill-health in her struggle against her rebellious impulses—against fate. She was not given half a chance. Her description of her condition may be repeated here:

I was at that time in good physical health, though nervously worn, but this death occurred in such a way as to cause me a great shock and within the six days following I lost twenty pounds in weight. For nearly three months I went almost entirely without food, seemingly not eating enough to sustain life, and I did not average more than three or four hours' sleep out of the twenty-four, but I felt neither hungry nor faint, and was extremely busy and active, being absorbed both by home responsibilities and business affairs. The end of the year, however, found me in very poor health physically and I was nervously and mentally exhausted. I was depressed, sad, felt that I had lost all that made life worth living and, indeed, I wished to die. I was very nervous, unable to eat or sleep, easily fatigued, suffered constantly from headache, to which I had always been subject, and was not able to take much exercise. The physician under whose care I was at this time told me, when I asked him to give my condition a name, that I was suffering from "nervous and cerebral exhaustion." (P. 242-3).

It is always the case in so-called neurasthenic states that the power of selfcontrol is weakened, resistance to obsessing thoughts diminishes and the latter tend to take on automaticity and invade and dissociate the personality. And there is also a certain degree of repression and dissociation of previously dominant systems of ideas. In other words every case of so-called neurasthenia and hysteria is a greater or less alteration of personality.¹⁷

Accordingly, although at the beginning of Period II, four years before, the B complex was only a loosely organized system of rebellious thoughts, wishes and impulses recurring from time to time, this system now began in her physically and mentally weakened condition to acquire increased force, to invade the personal consciousness, and breaking through the repressing force of the will to gain autonomous sovereignty and temporarily to dominate the conduct. In the prolonged conflict the rebellion with its contrary wishes was at moments to gain the ascendancy. In other words, these other elements came to the surface and gathered to themselves all the discordant elements of personality, much as a radical political party gathers to itself

¹⁷Hysteria from the Point of View of Dissociated Personality. *Journal Abnormal Psychology*, 1906.

all the rebellious discordant factions that are in antagonism to the governing conservative party. In one sense another side to the character had become crystallized and autonomous, and, through the intensity of its feeling tones, became periodically dominant. But not without protest from the previously dominant elements of personality. This protest however had certain psychological peculiarities which show that the conditions were not quite as simple as this. I will speak of them later.

Soon the repressed wishes, impulses—the B complex—began to manifest themselves in a way which indicated that a definite dissociation had taken place, although as yet, as I have said, there was no secondary *self* or *I* properly speaking. All the previous undercurrents of thought—the intensified shrinking from the particular condition of life, the internal rebellion against the conditions in general, the disinclinations, longings, wishes, and determinations—had become synthesized, and began to form a separate train of thought, so that at one and the same time there was a sense, as is so commonly felt in such cases, of a double train of thought; she had “a sense of being double.” It seemed to her, C, that there was “all the time a pulling in a different way from the way she had to go, a not wanting to live the life she had to live.” This “sense of being double” seems to have been so pronounced that to B, looking back upon it, it seemed as if these two trains of thought (the C personality and the B complex) “occurred concurrently and simultaneously, so that it could be said that one was coconscious with the other,” just as much as when there is loss of awareness on the part of the principal consciousness for the coconscious train. In this case there was, however, at this time, no lack of awareness and there is nothing to prove concomitance of different trains of thought rather than that the two trains did not rapidly oscillate or alternate from instant to instant.

The self-accusations and self-reproaches of the principal consciousness, C, rendered the pleasure impulses still more intolerable and tended the more to repress the rebellious train and thereby to disrupt further the personality and to crystallize the secondary synthesis. It became more than a matter of mental systems, the behaviour became affected and changed.

Corresponding to this invasion and domination of the ideas of the B complex the behaviour of C became altered, much to her amazement. That is, her conduct at times was governed by the impulses of her once repressed wishes and she found herself then doing things

which normally she had not enjoyed or done. Her health and strength also, at such moments, became extraordinarily improved.

This alteration of conduct and character and health became more obtrusive and characteristic at a later date when the B complex had become developed into the B personality. But the alteration of conduct can be easily recognized at these times if some of the previous minor characteristics of C in respect to this sort of behaviour are understood.

Among these characteristics were a great dislike of riding on electric cars, an almost abnormal nervousness about bugs and mosquitoes—I always disliked going into the woods for this reason—an aversion to exercise in summer, and a fear of canoeing. I had never enjoyed sitting out from under cover or on the ground as the glare of the sun was apt to cause headache and I abhorred all crawling things. I was reserved with strangers and not given to making my friends quickly; devoted to my family and relatives, fond of my friends, and not in the habit of neglecting them in any way. I felt much responsibility concerning business matters and had given a good deal of time and thought to them. Many more peculiarities might be mentioned. (P. 243).

In the B personality, as will be presently related, these and other traits were replaced by their opposites, but even at this time the complete reversal of her tastes and behaviour was obvious.

To my surprise [C states in her account] there were times when I did some of the things above referred to, such as sitting in the woods, etc. I felt a sense of wonder that I should be doing them and a still greater wonder that I found them pleasant. There was also a sense at times of impatience and irritation at being troubled with business matters or responsibility of any kind and an inclination to throw aside all care. I wondered at myself for feeling as I did and rather protested to myself at many of my acts but still kept right on doing them. It seems to me that these ideas and feelings formed a complex by which I was more or less governed and that this complex gradually grew in strength and can be identified with that of the personality (B) which first developed. (P. 243).

A more interesting account of this change of conduct is given by B:

As she grew more and more neurasthenic, it seems to me as I look back upon it, the *B complex grew stronger and more dominant*, and with this increase of strength of this complex, C began to live a life *corresponding to the impulses belonging to it*—staying out of doors entirely—and then there followed much improvement in her health.¹⁸ She took long rides on the electric cars, which she had always previously disliked

¹⁸It is interesting to note the apparent paradox of an increasing physically neurasthenic phase coincident with an increasing physically healthy phase. With the subsidence of the latter the neurasthenic state became obvious.

intensively; she had always been very much afraid of a canoe, but now she went canoeing often and enjoyed it. She was surprised and astonished that she should enjoy these things, as it was foreign to her natural and previous ideas and inclinations. There was no change of character, properly speaking, but she did things she disapproved of and knew at the time that she disapproved of them. There was a recognition that she was doing things she would not previously have done, and she protested to herself, but even this half-protest was suppressed. She would say to herself, "Why am I doing these things? I never cared for them before. Why should I care for them now?" The old doubts and fears were at this time out of her mind. The personality was C, but influenced and dominated by the B complex of which, of course, she was perfectly aware. (P. 317).

What is here described is obviously a mood but a mood which included altered bodily as well as mental characteristics. The alternation of neurasthenic and healthy phases also became more obtrusive when the healthy mood became a personality. The apparent recovery then deceived the medical attendant.

In these quoted passages we have a description of the uprush from the unconscious and successful sovereignty of the conflicting B complex. Before continuing with our analysis two points are worth noting. First: with the winning of sovereignty by this system of ideas, the previously dominating system—or self—sank to an inferior position and assumed the protesting, one may say, the rebellious attitude. Like two adversaries in a wrestling conflict, in which first one then the other holds the vantage and each in turn yields before the superior force of the other, so it was turn and turn about, and now the rebellious complex becoming the victor, repressed the protests, the self reproaches, doubts, fears, and scruples of the regularly constituted government.

Second: With the eruption of the B complex into the C personality it is interesting once more to note the increase of physical strength, and improvement in the general health. It was thought by her physician that it was really a condition of health which had supervened but, as will be seen, this was far from being the case; it was one of psychological disintegration. Nevertheless with the one system of ideas—the B complex—there were associated all the mental and bodily reactions of health, with the other complex the reactions characteristic of the neurasthenic condition. This alteration was still more noticeable when the B *personality* erupted. The same phenomenon was observed in the case of Miss Beauchamp. With the appearance of the "Sally" complex all the neurasthenic symptoms

vanished, and the personality became buoyant with health. Identical variations in health have been observed in other cases of dissociated personality; one phase of personality being characterized by an extreme hysterical condition, another by freedom from such symptoms (Felida X., Marcelline R., and others). This phenomenon is of great significance for the understanding of the neurasthenic and hysteric condition.

LECTURE III

THE B PERSONALITY

PERIOD III

Let us now return to C's account of the shock which occurred at this time, while the B complex was periodically dominant. It was the cause of the final complete dissociation of personality and the eruption of the secondary personality B.

The shock I received was of an intensely emotional nature. It brought to me, suddenly, the realization that my position in life was entirely changed, that I was quite alone, and with this there came a feeling of helplessness and desolation beyond my powers of description. I felt, too, angry, frightened, insulted. For a few minutes these ideas flashed through my mind and then—all was changed. All the distressing ideas of the preceding moments left me, and I no longer resented what, a moment before, had caused me so much distress. I became the personality which we have since called "B." I do not feel now that the episode was of a character that would have affected a person of a different nature, or even myself had I been in good health. Psychologically speaking, I suppose I was already in a somewhat disintegrated condition and therefore more susceptible. At any rate it did affect me. *From the moment of that shock I was, literally, a different person.* Even the episode itself now became of little or no importance to me; indeed I looked upon it rather as a lark and really enjoyed it, as I did, in this character, succeeding events. *With the change to "B" there was no loss of memory as sometimes occurs under such conditions.* It seems very curious to me that the effect of this shock was to change me not to the despondent, despairing mood of "A" which came later, but to the happy mood of "B."

In describing the two personalities I shall sometimes have to refer to them by the letters A and B to avoid the constant repetition of "myself as A—myself as B."

As B, I was, apparently, a perfectly normal person, as will be seen from the description which follows, except that I was ruled by the fixed idea that upon me, and me alone, depended the salvation, moral and physical, of a person who was almost a perfect stranger to me and who was the subject of a drug habit. I had known this person but a few weeks. This idea became an obsession; all else sank into insignificance

beside it; *nothing* else was of any consequence; I went to all lengths to help this person, doing things which, though quite right and proper, indeed imperative from my point of view as B, were unwise and unnecessary. I believed that I was the only one in the world who would stand by him; that every one else had given him up as hopeless and that his one chance lay in his belief in me.

The writer neglects here to say that it was not only as B that she had undertaken the "salvation" of the drug addict. As C she also shared in this solicitude and had begun the reformation. B only continued it but from different motives as later stated by C herself. B does not refer to it in her story apparently not taking it very seriously. Of course in my numerous interviews I heard an exhaustive account of the whole affair.

The marked change in health and strength for the better noted in those phases, during Period II, when the personality was dominated by the B complex and mentioned in the last lecture was still more accentuated now in the B personality. C thus refers to it:

With the change of personality, which will be clearer as you read, there was also a complete change of physical conditions. *Previously neurasthenic I, as B, was perfectly well and strong and felt equal to anything in the way of physical exercise.*

You will also remember that in the last lecture I spoke of certain minor traits which had been characteristic of C and which were markedly altered in an opposite direction under the dominance of the B system and induced impulsive alterations of behaviour. These changes were accentuated in the B personality from the very first as C goes on to describe.

The minor traits I have above mentioned were replaced by their opposites. A walk of three or four miles did not tire me at all; I tramped through the woods during the hottest days of summer, with nothing on my head, feeling no discomfort from the heat and no fatigue; I sat on the ground in the woods, hours at a time, not minding in the least the bugs and the mosquitoes; canoeing I was very fond of and felt no fear of the water. I also took long rides on the electric cars and found them perfectly delightful. These are small things but, as you see, it was a radical change and seems as strange to remember as the more important ones.

The change in the emotional and feeling tones, the former representing a different set of emotion-instincts, from those that were habitual, is illustrated in the following passage:

As B, I was light-hearted and happy and life seemed good to me; I wanted to live; my pulses beat fuller, my blood ran warmer through my veins than it ever had done before. I seemed more alive. Nothing is

stranger to remember than the vigorous health of B. Never in my life was I so well, before or since. I felt much *younger* and looked so, for the lines of care, anxiety, sorrow, and fatigue had faded from my face and the change in expression was remarked upon. I neglected my family and friends shamefully, writing short and unsatisfactory letters which left them in ignorance of my health and plans; business affairs I washed my hands of entirely. I lost the formality and reserve which was one of my traits. My tastes, ideas, and points of view were completely changed.

I remained in this state for some weeks, enjoying life to the utmost in a way entirely foreign to my natural tastes and inclinations as described above, walking, boating, etc., living wholly out of doors; and also doing many irresponsible things which were of a nature to cause me much distress later.

Some of this might, perhaps, be ascribed to improved health though different from anything I had ever been before.¹⁹

A point of considerable significance is the youthfulness of this B phase, a trait which the writer C notes and which B in her account emphasizes. When later the case came under my observation this phenomenon was so noticeable that it arrested the attention.

It may be interesting to hear B's description of the shock, more dramatically told than C's, and of the changes above mentioned of the personality (health, emotional tones, conduct, and youthfulness) immediately following.

It runs as follows:

At this time there came to C a third shock of a strongly emotional nature, giving rise to events which I call *period III*. It brought to her the realization of a fact of which she had been unconscious; she had never thought of the possibility of such a thing and she was startled, frightened, angry, all in a flash—and I was there. James, in explaining "Sudden Religious Conversion," speaks of a "flowering of the subconscious,"—well, I "flowered," and C disappeared somewhere; *the B complex had become a personality* and I lived a life of my own choosing²⁰. How slowly this complex gathered form in this case may be seen from the fact that it was five years from the time of the beginning of her husband's illness before I came as a personality.

Now, when I came as a personality, I felt much younger than C; my ideas of what constituted pleasure were more like those of a girl of twenty—as C was when she received the first shock (*period I*). But in character, points of view, tastes, emotions, in everything that goes to make up personality I was quite different from anything C had ever been; also in health. I was strong and vigorous, taking long walks and feeling no fatigue. I was also very happy. Life seemed so good to me; everything was so beautiful; the outdoor world looked to me as it

¹⁹The same as when dominated by the B complex but in a more extreme way.

²⁰That is, the remainder of the C complex subsided into the "unconscious," where, of course, its experiences were conserved. They could be recalled as a memory by B. As a system of ideas the B complex had been "flowering" for five years. (Ed.)

does to one who has been for months shut in through illness. I loved the trees, the sky, and the wind; but I did not love people. I felt no care or responsibility—that is why I was so happy. I remained the only personality for about *one month*, when there came the fourth emotional shock producing *period IV*.

These accounts need further explanation. C remarks: "It seems very curious to me that the effect of this shock was to change me not to the despondent, despairing mood of A, which came later, but to the happy mood of B." A consideration of the facts in more detail renders the reason obvious. It must be kept in mind that the dominant feature of the B mood or personality was the B complex, and the nucleus of this system of ideas was the "rebellion" I have described. This rebellion again had its first beginnings 19 years before (period I). We have traced it through the succeeding years, with its later accretions, growing and expanding in intensity and extent, like a political insurrection, until it had taken into itself a large field of ideas and became the B complex. Bear in mind here that the primitive germinal first rebellion was the reaction to an emotional shock in which fright and disgust as elements occurred plus the X affect. Now the second shock which was experienced at the third period was fundamentally the same in nature as that of the first period. It gave rise to the same *affect*, X, and mental awakening, to the same kind of realization of her situation, and the reaction, particularly to the affect, was the same rebellion. *But the rebellion had meantime, in the years that had passed, grown into the B complex, and so it was this B constellation of ideas which erupted into consciousness and dominated the whole field of personality.* Though the second shock awoke the same affect as did the original shock, it was consciously mild and probably for the most part subconscious, being repressed and submerged by the reacting emotions of fear and anger, which latter blazed forth. And in the reaction there were, also, the emotions of disgust and self-assertion and the vengeful emotion.

With such emotions, particularly anger and disgust; this affect was in conflict as was also fear. When two emotions are in conflict both cannot live; one will be suppressed. Fear will be suppressed by an outburst of blazing anger, and anger cannot exist when an overwhelming fear is excited. So the mild X affect and fear were immediately repressed by anger, disgust and the compound vengeful emotion, the three not in any way conflicting with one another but as allies reinforcing each other in the attack.

Consequently from the B personality, which sprang to life as the reaction to this affect, the X affect itself was completely repressed and dissociated, so that this personality is entirely without this and other traits of the C personality. Likewise, although this is not so easy to determine, owing to the impossibility of reproducing all conditions under which a given individual would react normally to any given emotion, fear seems to have been dissociated from the B personality. It is certainly true that B experienced no fear and other emotions with which C habitually reacted to certain situations. This question of the involvement of the emotions in dissociation will be discussed in another place.

As to the X affect, it is of some significance that later, after the development of the third personality, A, which alternated with B, this personality retained this affect (as well as fear and others lost to B) and the awakening of this affect in A would regularly change this personality to B; that is, repress the A personality and awaken B. Many times other emotions, particularly anxiety, (fear) would have the same effect, but the affect in question would always induce the change.

From one point of view it may be maintained that all this emotional reaction, called "shock," (that primarily called into being the B personality) was a defense reaction. It certainly was, as any outburst of anger may be a defense reaction, as it is in the bull in the ring of a Spanish bull-fight. Under other conditions anger as an element in the pugnacity instinct may, like other emotional impulses, be an attacking reaction.

But labelling with names does not give us any insight into the mechanism of a reaction any more than labelling a machine an automobile gives us any idea of its mechanism. It gives only a teleological meaning to the machine.

What is a fruitful question, however, is whether the "shock was a defense to an external aggression or to the urge of an unacceptable subconscious *wish* containing the repressed affect X. Some will *wish* to make this latter interpretation. It is entirely incompatible, however, with the fact that the same conflict and "shock" had previously occurred under conditions when, even if there had been such a wish, it could not have been unacceptable, as there was no reason therefor, but on the contrary it would have been her duty to have fulfilled it. It is useless in this case to work that trumpety affect business in this way.

Furthermore, as a matter of experience, we find from a study of cases of multiple personality that after two independent systems of ideas have been formed, almost any emotional shock is liable to cause the displacement of one system and the substitution of the other system. This was observed over and over again in the case of Miss Beauchamp, as it was in this case. Why it should be so is not always obvious at the time of any given occurrence. That there is a specific psychological reason and dynamic mechanism we cannot doubt. Undoubtedly if we could probe sufficiently extensively into the unconscious in each instance we should find that subtle associations in the substituted systems had been struck and the change determined by this stimulus. When the associated element is organized with strong emotions the discharge of the emotion more easily represses and dissociates the rival conflicting systems. This gives the appearance that it was the emotion alone, as an isolated factor, which induced the alteration of personality:

What happened then when the change of personality took place was this: The acquired B complex, which had been developing in content and conative intensity, surged up as a reaction from the unconscious (where it had been conserved during the normal mood in a dormant condition), came into conflict with the A mood and repressed and replaced this previously dominating side of her nature. By this dissociation this side was put out of commission so to speak. In turn it remained dormant, of course, conserved as unconscious neurograms, ready to be resurrected under favoring conditions by appropriate stimuli.

But in the formation of the B personality there was more than this; otherwise there would not have been generated a personality; the alteration would have been limited to the incursion into the field of consciousness only of the B complex as had so often happened before. On the one hand a larger synthesis took place. The B complex dragged out of the storehouse of the unconscious the acquired and conserved ideas and other experiences of childhood and girlhood that had an associative relation to the system which formed the B complex.

On the other there was, as we shall see, a dissociation of certain *innate* dispositions, instincts and sentiments belonging to normal personality. Specifically the most important of these were, the instinct of self-abasement and its self regarding sentiment, the "tender emo-

tion" (affection) and its parental instinct, the X affect and its instinct, fear (instinct of flight) and vengeful emotion.

The emotions and their instincts and the innate dispositions, appetites and tendencies, being psychophysiological arrangements inborn in the organism and not acquired, are the very foundations of human personality. Without a recognition of them and without assigning to them their proper parts and due weight in determining mental traits and behaviour alterations of personality cannot be explained or understood.²¹

The justification for the interpretation I have given of the genesis of the B personality is found in an analysis of its manifested characteristics. In the first place this B phase by common consent, even in the opinion of those who were in entire ignorance of what had psychologically occurred—i. e., the alteration of personality,—was much younger in character than the mature C. She appeared to be a young girl of 18 or 19 years of age. Her friends spoke of her, when remarking on her improved health, as "being as she used to be." She looked younger.²² As I myself observed her on, I might almost say, hundreds of occasions, the contrast between the actual age of the subject and the apparent age of B as indicated by expressions of face, the vivacious mannerisms, the girlish attitude of mind, points of view, tastes, etc., was remarkable.

All this together with the lack of appreciation of many of the responsibilities of life and of the duties and conditions which pertain to motherhood, social relations, and conventions, made up a picture of youth that was unmistakable. The contrast between the mature C and the girlish B became almost dramatic when the change of per-

²¹The science of human personality is becoming a special branch of psychology and is based upon the recognition and study of the innate psycho-physiological systems of which a few are mentioned here. Of the most recent works on this subject, those of Alexander F. Shand (*The Foundations of Character*) and William McDougall (*Social Psychology*) are the most important contributions. They are based on the study of normal behaviour. Abnormal alterations, such as are met with in the psychoses and multiple personality, will prove to be a more fruitful field for study and will provide more valuable contributions to our knowledge of normal mechanisms, just as the pathology of the nervous system has done for our knowledge of its anatomy and physiology. Disease dissects the mind far better than can introspection or observation.

²²In a letter written in the phase A to me she writes: "B seems to revert to the time before all the sorrow and trouble. She writes in the diary [kept at my direction by the different personalities] as I used to feel. She 'won't be unhappy'; she 'will have a good time,' etc. She seems younger than I, somehow. I find that my friends often think me more 'like myself,' when B is here; she also spends money as I used to and will not acknowledge the necessity of economizing. . . ." In another letter she writes: "Then came the time when I was wholly B. Everything but my own pleasure was cast to the wind. I felt and acted like a girl of 18, and I know that I looked years younger than I do now."

sonality took place suddenly as it later frequently did in my presence.

When we come to analyze the traits which gave this impression of youth we see that it was justified. One side of C's character, as we have seen, was a love of happiness and the pleasures which induce the joy of life. This side was dominant in B; but the *kind* of pleasure which appealed to B was not only that which appeals to youth but that which had particularly appealed to the subject when a young girl. It was "tramping through the woods in the hottest days of summer," canoeing and rowing in boats, walking, riding in electric cars—in fact, the out-door life that appealed to her most strongly and was her greatest enjoyment. "Oh, wouldn't I just love to tramp through the woods or sail off over the waves, or anything exciting," she wrote. Such of these things as she had been able when a little girl to indulge in she then enjoyed. As a child and during girlhood she liked camping out and sailing, but as she grew older, say about sixteen or eighteen, she became afraid of the water and row boats. Canoeing she had never done before her marriage and then was afraid of it.

We have seen that childhood's experiences are conserved in the unconscious (neurographic residua) although they may never come to the surface of consciousness unless resurrected by some device or accident. Accordingly in the case of B everything points to the conclusion that the conserved sentiments, with their organized emotions and feelings, of the pleasure of childhood and adolescent life, sentiments by which the young girl was governed, were resurrected. The play-instinct, or innate disposition, long repressed, particularly was revived and played a large part in determining behaviour. The rearrangement of this and other innate dispositions will be more conveniently discussed later in connection and contrast with the A personality.

Of course there is no sharp line of division between different periods of life, one running into the other, and the ideas, sentiments, desires, habits, etc., of one period may continue more or less unchanged well into another and beyond. So obviously we cannot ascribe with precision to a past definite age traits of character of the kind we are considering. Such traits belong to the evolutionary development of the individual; they tend to become modified by the clash with new experiences, and, when incompatible with the knowledge and habits acquired by new experiences, to become repressed—when not incompatible they may persist late into adult life. So some of these traits have persisted as a side to, or as elements in the char-

acter of B. C. A. into her present life; some, however, have been modified or repressed into the unconscious. As age advances, as the child passes into adolescence and then into maturity, there comes wider knowledge of the facts of the environment, of its dangers and other relations, a more true and complete conception of the meaning of life, a more extensive world view, and a recognition and assumption of duties, cares, and responsibilities. And all these acquisitions tend to form a conscious organism with new sentiments which give new acquired reactions to stimuli in place of the old reactions, (traits and other conative tendencies). Activities, for example, which before received their impulses from play dispositions are later inhibited by sentiments invested with the instinct of fear (flight). So B. C. A. acquired a fear of the water (boats, canoeing) and a dislike of bugs and mosquitoes and electric cars. Why these changes in her mental reactions took place we cannot say without making a more extensive search into the experiences of her past life, and the information when acquired would hardly repay the time and labor of the inquiry. We cannot say, for example, why she has disliked electric cars without resurrecting the memories of past experiences pertaining to them and other associated ideas. Perhaps the dislike arose simply out of the noise and resulting discomfort and headaches; or it may have had a more subtle cause in associated ideas of danger which would not appeal to a girl, or possibly such objects may more subtly still be the symbolic expression of some unconscious process. It does not bear upon our present problem. (The dislike of mosquitoes and bugs very probably arose from having been bitten and poisoned badly by them when a child).

There were certain other youthful traits and tastes in B which are worth mentioning. This personality was extravagant in money matters. "She," the personality A wrote, "spends money as I used to, and will not acknowledge the necessity of economizing." That is to say, the regulation of the household and personal expenses, according to the requirements of business sense, and proper appreciation of the financial management was scarcely recognized by B who desired to spend money as B. C. A. had done as a girl, before being initiated into the responsibilities of domestic management. Like such a girl, to the discomforture of the other personality, she spent money as if all were pin money, without appreciation of making ends meet in the management of the household.

Another and what will seem a strange peculiarity of B was the

feeling that she was not the mother of her child. "I am not his mother," she would say. "He is not my son"—"*I* never was married." "I know all her experiences," she wrote me in a letter, "but they are *her* experiences not *mine*. Why! *I* was never married, Dr. Prince, and I am not Willie's mother. All those experiences belong to A. I know she *had* them, but then, so do you. The only difference is that I know exactly what she thought about them." Indeed she carried this so far as to entirely neglect the responsibility of looking after his life. This was true also of the time when B. C. A. was ruled by the B complex before the change to the B personality. On one such occasion for example, she allowed this young boy to take a long journey of many hundred miles through the west, roughing it in the woods and canoes, without a care or anxious thought on her part during the whole time he was gone. All the arrangements were made by others while she herself did not even go to the station to see him off. Previously she had always felt the greatest motherly solicitude for the boy, even foolishly devoted to him, and could not bear to be parted from him even to accompany her husband on a journey.

This peculiar trait is easily understood on the theory that rebellious B was largely a systematized resurrection of pre-marital complexes and in fact dissociations of the tender emotion (parental instinct). I have already pointed out that B regarded the "rebellious" complexes as herself, but not the other ideas of B. C. A. In referring to the former, as I have said, she used the word *I*, saying, *I* thought so and so, but she did not use such expressions regarding the other systems of B. C. A.'s thought after the genesis of these rebellious complexes. Likewise she regarded as her own the earlier youthful experiences before dissociation occurred. In the constellation of her complexes none of the experiences of maternity (which occurred after the development of the rebellious complex) were synthesized, any more than the sentiments and other conflicting thoughts of the A phase. Even in the embryonic contrary impulses of the B complex, it will be remembered, there were dislikes to "fuss" over the baby conflicting with the maternal instinct. She never, therefore, felt that motherhood was a part of her own experience.

I said that the parental instinct with the emotion of tender feeling was dissociated. This absence of tender emotion (affection) was also manifested in her attitude towards the different members of her family and her friends. As a girl she was markedly affectionate just as A and later C was, but as B she had lost this trait. She neglected

her family most shockingly, in a way that showed complete absence of the impulses that come from tender feeling, and without the slightest compunction or recognition of the fact that she was wanting in affection. I might give numerous specific instances of this but refrain from doing so for obvious reasons.²³ B liked people but for other reasons than those which depend on personal affection. This absence, then, of the tender emotion with its impulses was the second factor in determining the feeling that B had of not being the mother of her child. It also, of course, prevented the building up a new sentiment of maternal affection through experience. All this is in conformity with our interpretation.

The way other instincts and innate dispositions were affected will be better described in connection with the A personality for contrast.

Another peculiarity of B was the change in literary taste. The lighter reading in which B found pleasure contrasted strongly with the literature dealing with the deeper problems of life that appealed to A. This difference has been touched upon by C in her account. It would take us too far afield to enter into the psychological reasons for it.

It remains to point out that the reactions of the personality in accordance with the new synthesis were intensified and became the sole reactions by the fact of the dissociation of those systems of ideas which represented the wider world view and which were organized with instincts and innate dispositions now inhibited. Those systems were the outcome of the cares, anxieties, responsibilities, and sorrows of later life. All these, which were acquired and had their origin at a comparatively late period, had subsided into the unconscious and ceased to influence the conscious life and give rise to their corresponding reactions. The emotions and sentiments of anxiety, remorse, self-reproach and despair, so conspicuous in the A phase, were com-

²³C writes: "To me this point of the affections is one of the most interesting and curious. As a child and young girl I was affectionate, shy, proud, and reserved—everything that B was not. I positively never had in me any of these traits that B exhibited during those weeks . . . except gaiety."

This statement, when analyzed, is in entire agreement with the results of our study. The absence of affection is what would be expected from the loss of the primary emotion "tender feeling," the affective element in the parental instinct. Shyness is determined by the instinct of self-abasement which was dissociated from B. Likewise with the self-regarding sentiment of pride in one of its varieties, self-respect. According to McDougall this comprises two instincts; that of self assertion with its emotion of elation, and that of self abasement with its emotion of subjection. The latter instinct we have seen reason to conclude was inhibited in B. Hence on this theory of pride, this sentiment was lost.

pletely dissociated from the B phase and formed no part of it. Though there was no amnesia for them as past experiences they were dissociated in the sense that they did not take part as psycho-physiological dispositions in the personality. They could be voluntarily recalled in an intellectual way as memories, but like most memories they had lost their emotional tones and were not awakened by any contemplated or actual line of conduct. Not entering the new B synthesis there was no clash by which the reactions might be modified. The sole reactions were, therefore, those of the B synthesis and were mostly those of pleasure and joy. You must not overlook the fact, however, that the dissociated elements of personality were still conserved and, as we shall see, capable of being resurrected and thereby taking part in the reproduction of the original personality, or of forming by themselves another dissociated one.

The *temperament* of the B personality is in accord with the conception of a modified reversion to the conserved unconscious personality of early life. B. C. A. "was naturally very light-hearted, happy, buoyant." Later when going through the stress and strain of her husband's illness, and later still after becoming neurasthenic, she became apprehensive and given to self-reproaches, worry, and depression. She was racked by emotions of an anxious depressing kind. All this was enormously accentuated in the secondary personality A, (to be presently described) whom in banter I used to call "Mrs. Gumidge." Now B reverted in temperament to the earlier period; she was free from depression; "had more courage, was light-hearted, merry; conditions did not seem so dreadful as they did to A," and she "took things as they were;" "this was the way she used to be."

If I may anticipate a little the development of the A personality, a passage or two from letters will show this difference in temperament as manifested by the emotions. B wrote, "A is nearly crazy about those papers. She simply 'tears her hair' and groans, and then, presto! change! and I am here." Again in a note to her other self (A) she writes; "I suppose you have a 'deep-horror-then-my-vitals-froze' expression on your face now. Really, you suffer more to the square inch than any one I ever knew." Although it is hardly fair to ascribe these emotional traits of A—a disintegrated personality—to the normal C, still they were and are at times noticeable in C as moods, or when under stress and strain. (C of course has pleasant affects and joyous moods as well). B on the other hand was a perfect stranger to such feelings; she did not know the meaning of them;

they were completely dissociated from her ideas. B's sole emotions were those of pleasure and exaltation; C's emotions included unpleasant and depressing ones as well, while A's stock was made up almost entirely of the latter. This dissociation of unpleasant and depressing emotions from B is well manifested by her memories. When C (or A) recalled (and it is still true) an unpleasant experience the memory was accompanied by the original emotion in its full intensity. She lived over again the original experience and manifested all the feeling in the expression of her face and in gesture. But when B recalled this same experience of C (or A) she simply remembered it intellectually as a fact, without the feeling tone. In fact she would recite a painful fact of C's experience with a gayety of tone that betokened enjoyment at the other self's expense. The same phenomenon was still more striking in B as a coconscious personality.²⁴ As a coconsciousness she always insisted that while she knew C's (and A's) thoughts she did not feel her emotions. "You see I know all that A thinks but I do not *feel* her emotions; she is all emotion," she wrote. This she insisted upon again and again. She only knew what the other personalities felt by the way they acted. Similarly the affect which was the cause of the "rebellion" was dissociated from B. This same phenomenon was observed in the case of Miss Beauchamp. Sally as a coconsciousness knew the thoughts of the personal consciousness (B I or B IV) but she was not aware of the feelings that accompanied the thoughts; the feelings she could only guess from the actions of the principal personality, and as an alternating personality Sally likewise was entirely devoid of certain emotions which were strongly accentuated in the other personalities.²⁵ This dissociation of affects from B helps us to understand the difference in the reactions of B, C, and A to the same stimuli.

LECTURE IV

THE A PERSONALITY

PERIOD IV

We may now return to C's account of her dissociated life—to the point where she was about to describe the development of another personality, A, and at which I digressed.

²⁴B later became coconscious with the other personalities as well as alternating. This phenomena of the case will be discussed in another study.

²⁵The Dissociation of a Personality; pp. 150 (?).

Bear in mind that it is the B personality that now received the shock and that the revelation of the deception, therefore, was to a personality whose point of view was not that of duty or affection but of mere joy and pleasure.

After a period of a few weeks I received a second²⁶ shock, which was caused by the discovery of deception in matters²⁷ which my "obsession" had taken in charge. The revelation came in a flash, a *strong emotion* swept over me, and the state B, *with all its traits, physical characteristics, and points of view disappeared, and I changed to another state which we have since called A*. In this state my physical condition was much as it was before the first shock,²⁸ that is, I was neurasthenic. From a state of vigorous health I instantly changed to one of illness and languor; I could hardly sit up, had constant headache, insomnia, loss of appetite, etc. My mental characteristics were also different. As before, however, there was no amnesia either for the state when I was B or for my life before the first shock.

Now, though as A I was filled with most disproportionate horror at what had occurred during the weeks of my life as B, I was ruled by the same obsession, but with this difference: what I, as B, had done with a sense *pleasure*, I, as A, did with a sense of almost horror at my own actions, feeling that I was compelled to do so by what seemed at the time a sense of *duty*. I felt that I must carry out certain obligations, and I doubt now, as I afterward expressed myself to you, if I could have resisted had I tried. [i. e. she was again governed as formerly by the B complex]. I would not refuse the demand for help which was made upon me because, as B, I had promised my aid, but in complying I was obliged to do things which seemed to me, as A, shocking and unheard of. I felt that my conduct was open to severe criticism but I had promised, and must fulfil though the skies fell. It seems to me now, in the light of our present knowledge of B, that I, while in this A phase, was in a sort of somnambulistic state governed by what I have learned were coconscious ideas belonging to B; and that the impulses of the B complex were too strong to be resisted; but in my memory my ideas as B were at this time so curiously intermingled with my ideas as A that it is useless to try to analyze my mind more accurately. In mood, points of view and ideals I was A, but I *did* the things B would have done, though from a different incentive.

To fully appreciate the situation and in that light the meaning of A's point of view in the preceding passage and in that which follows, we must remember that, when the original personality B. C. A. was suddenly changed by the preceding "shock" to the B personality, for a few minutes the subject was angry, frightened and felt insulted. There can be no doubt that if the change had not occurred she would

²⁶Fourth according to the division of periods here adopted.

²⁷Money matters.

²⁸Second which brought the B personality.

have resented any further continuance of friendly or philanthropic relations with the object of her resentment. When she came under my observation later as A, she was overwhelmed with (unjustified) humiliation and blazed with wrath at the mere thought of the episode. Her governing feeling was vengeful emotion. Even as the normal C she could not forgive or forget.

Now imagine the scene: a person dominated by such feeling suddenly, without apparent rhyme or reason, completely changing in her feelings and point of view, regarding the episode as a lark, enjoying it and smiling and happy. And then in this frolicsome mood continuing to play for a month with the object of her previous wrath. Such a scene on the stage would be a most dramatic one. Imagine what must have been the bewilderment of the victim.

Then, after some weeks of this play, the B personality changes back to the disintegrated self A. As A she remembers what she has done as B in complete contradiction to her previous feelings and views of the episode, herself and the object. She is overcome with horror on remembering her behaviour (as B) and yet she finds herself ruled by a fixed idea of the B complex and going on doing, but from a different motive, the very things which had horrified her.²⁹

Keeping this situation in mind we can understand A's feelings and viewpoint bearing in mind that all was morbidly exaggerated.

For a few days I remained A and then owing, I think, to a lessening of nervous tension, I changed again to B [personality] and remained in that state for two or three weeks during which time I was physically well and happy again. At the end of this time, as a result of another realization of the actual situation, A reappeared and was the only personality for some weeks. These changes were due to successive emotional shocks.

The following passage which continues A's viewpoint accurately describes her state of mind when she came under my observation.

²⁹Apropos of this B states: "I still continued, in a sense, as the B complex in the same way as during the time when C lived the life which was in accordance with my nature and opposed to hers, i. e., the out of doors life during the latter part of the second period; only, as a result of the time (*period III*) when I was the sole personality (though I did not think of myself as such) and had lived my own life, I had, it seems to me as I look back upon it, becomes more crystallized. There had before seemed to be a conjoining of two natures, and there was now, only the second one, myself, was more strongly integrated. C., or rather A, as I shall call this new phase, had no amnesia for the preceding period (*III*), and as before was still perfectly aware of the B complex. She was ruled by this complex, as C had before been ruled, and kept right on doing things in accordance with the impulses of the B complex. She was something like a somnambulist, I think, partly realizing the difference in her conduct, which seemed strange to her, and unable to help herself."

When you first saw me I was A at my worst. I had no amnesia for the events of the preceding months when, as B, I had been filled with the joy of living. There was no thought on my part of any "change of personality"—I had never heard of such a thing—but I was like one slowly awakening from a dream. I was equally aghast at what I (B) had done for *pleasure*, and at what I (A), had done from a sense of duty; one seemed as unbelievable as the other.³⁰

One of the most shocking things to me, as A, was the fact that I had *enjoyed myself* as B. Had I committed the most dreadful crimes. I could not have felt greater anguish, regret, and remorse. I had been dominated by the fixed ideas and obsessions of B; I had felt that I *must* respond to any call for help made by this person [the drug-addict] even though it was against my inclination and judgment to do so; there seemed no choice for me in the matter—I *had* to;³¹ I could see no point of view but my own. To do what seemed my plain duty I was willing to sacrifice myself in every way, but could not see that I (A) was now causing as much anxiety to my family as I had previously done as B; that I was sacrificing them also, and that my idea of duty was entirely mistaken. A, it would seem, was the emotional and idealistic part of my nature magnified a thousand times. My emotions and ideals as A were not different in *kind* from those of my normal self, but were so exaggerated as to be morbid.

As A I was full of metaphysical doubts and fears, full of scruples. I did not attend church because I felt that I could no longer honestly say the Creed and the prayers. The service had lost all meaning to me and so it seemed hypocritical to take part in it. I felt that I had utterly failed in the performance of every duty, and tortured myself with the remembrance of every act of omission and commission. I accused myself of selfishness, neglect, in fact, of nearly all the crimes³² in the calendar including, in an indirect way, that of murder. My conversation was always of the most serious character,—religion (I believed in nothing), life after death (of which I found no hope), and I dwelt much upon the fact that no one should be judged by their deeds alone, that no one could tell what hidden motive had prompted any given act. This was because I had (as B) done so many things which (as A) I wholly disapproved of and felt might be misunderstood. I did not understand them myself but knew that my motive had been good. I was frightened, bewildered, shocked, agonized—concentrated anguish and remorse. During these weeks I suffered more than it ought to be possible for any one ever to suffer for anything, and always, over and over in my mind went the same old thoughts,—“*Why* did I do as I did? *How* could I have done it? *Why* did it seem right? What would my friends think if they

³⁰At this time A had removed from the environment in which all this that has been narrated had taken place, and had come under my care; she was then A. There were no longer calls for duty to be performed, no longer responsibilities to carry out. B was dormant and it was impossible for the fixed idea to act, though undoubtedly if the former situation was restored the old parts would have been re-enacted; as it was she looked upon the past as a closed chapter and she was able to judge herself as A and B. In the quiescence of her fixed idea she was able to see herself, though in a distorted perspective, and reprobated her conduct in both phases of personality, and as she says, was “aghast.”

³¹Referring to the fixed idea mentioned above of saving this person.

³²Referring to her husband's illness and death.

knew? I was mad! *I was not myself.*" Finally I decided to end it all—I could not live under such a weight of humiliation and self-reproach. I am sure, Dr. Prince, that you must remember how impossible it was to reason with me as A, for it was at this time and in this state that I was sent to you and you first saw me.

Summing up this statement a new personality had come to the fore—a personality that was the antithesis of B. The traits which characterized A had been left entirely out of B while those which had characterized B were left entirely out of A. Both sets of traits were to be found in C though less accentuated and less freely manifested. The gaiety, love and pleasure and joy of life, the absence of all thought of responsibility and care belonging to B had given place to seriousness, a sense of responsibility and duty, a feeling of apprehension, to doubts and fears and self-reproaches. Depression and sorrow had taken the place of exaltation and joy. The neurasthenic state had replaced buoyant health.

Now it should be noted that these latter were the traits of the subject of C during the preceding four year period of stress and strain, and the succeeding neurasthenic period, and represented a side of her character which was developed, systematized and intensified by the circumstances of her life. In accordance with these traits, habits of thought had been established and by constant repetition complexes had been built. It is of importance to note that it was against these very A traits that the B complex at that time had rebelled—that very complex which was to become the centre of the B personality, and which was the other side of her character. It was during the neurasthenic state that the A traits had become abnormally developed and belonged to the neurasthenic condition. When the personality changed to B these A traits became dissociated but still remained conserved as unconscious systematized neurograms; now the A traits were awakened once more, there was a conflict and the B traits, the lighter side of her character, were repressed, dissociated and subsided into the unconscious. A was, therefore, a dissociated personality. She was the original C, if you please, but now so shattered and shorn as to be but an abstract and wreck of her former self. The normal C possessing both sets of traits had been, and now, resynthesized to health, is able to compare, to weigh, to modify, to balance the judgments obtained from the point of view of the B system with those of the A system and thus keep a fairly equitable poise of mind. The one counteracted the other fairly well. The A and B phases being respectively deprived of the characteristics of the other, each exhibited its own

traits in a highly intensified degree, and manifested excessive reactions to the environment. The dissociated state A was plainly a reversion to the stress-and-strain and neurasthenic period. The awakening of A was the awakening of a system of thoughts which had lain dormant during the B state. Now the repressed B state was dormant.

It is of great significance for an understanding of neurasthenic disturbances that the awakening of the A system brought back all the neurasthenic symptoms that had as physical reactions accompanied this system at the time when it was dominant in C. The A system of thoughts, emotions, instincts, innate dispositions, etc., and the physical symptoms necessarily went together, for the latter are the expression or reaction of a dissociated personality that is deprived of its sthenic and exalting emotions. The moment the sthenic emotions were brought back (in C or A) the physical symptoms disappeared. The disappearance of the neurasthenia even in A when certain emotions were temporarily restored by suggestion was remarkable.

What caused the awakening of the A system? We have seen that the awakening of the rebellious B personality was an emotional trauma which was the same in kind as that which originally gave rise to the primitive "rebellion" as a reaction to the emotion. A similar trauma later awakened the same rebellion but one grown to the large proportions of the B complex. So in like fashion the new trauma to B awakened the A system as a reaction and associative phenomenon. What was the new trauma?

C in her written statement does not give the nature of the "strong emotion which swept over" her when the "revelation came in a flash." It was very different in character from the other. It was *apprehension*—the apprehension of moral disaster to the person whom she was trying to save. There was no resentment at the discovered deception, no thought of wounded self, no feeling of injury as might be inferred from the language of the writer, but only the thought of her own *responsibility* in the circumstances, and of *duty* undertaken, and the feeling of *anxiety* for the future of this other person; and there was a sense of *disappointment and failure*. These erupted from the A system.

It was this same system of ideas, but organized about her husband as their object, which had been dominant in C during the four years period of stress-and-strain and "neurasthenia." They had lain dormant in the unconscious during the B period. Now they are struck and excited to activity. There is a conflict. The impulses

from the conflicting A emotions, being the stronger, repress the B impulses and the A system is awakened as a personality.

The question at once comes to mind whether the object of B. C. A.'s solicitude was not a surrogate for her deceased husband, a sort of symbol, and had not become the object of the transference (to use the language of the psycho-analysts) of the solicitude which had previously been bestowed upon her husband's health and future well being; whether this new person had not been substituted for the ill husband in that A system of ideas which during four years had been characterized by responsibility, duty, anxiety, disappointment, failure, etc.; whether, indeed, it might not be held that the solicitude for the salvation of this drug addict was not a defense reaction against self-reproach for an imaginary responsibility for the illness of her husband. Such self reproaches she describes.

If this were true, the awakening of the A system by the discovery of the deception (which was only the banal one of money matters) and realization of failure, disappointment, etc., would be all the more comprehensible in view of the very strong and close associations which the new object would have in the system. But if true I cannot see that it would have any further or deeper significance. There was no need for disguise. Certainly solicitude for a husband, disguised in another person, needs no disguise and could not be unacceptable. But painful *self-reproaches* for former failure could not be faced, and satisfaction could be found in the performance of a new duty as a sort of atonement.

Again was there any subconscious sex wish or urge that could not be admitted to herself and to which the change to A was a defense reaction? I have been unable to discover any. And if there were I am unable to see how the revelation of deception in money matters required a defense reaction against the fulfillment of this wish. That sounds like Alice in Wonderland.

But why did the revelation shock B, who with her traits would not have cared? I can answer this from my intimate and fuller knowledge of C's and A's ideas. It was a revelation of the truth. The true character of the object of their solicitude, "whom everyone else had given up as hopeless," was revealed in a flash, and this "revelation" had struck, not B, but the submerged A (or C) system, which immediately emerged in an uprush from the unconscious. The shock was not to B but to subconscious A. And the reaction was

"disappointment," "failure," "apprehension," etc. Similar phenomena have been observed over and over again in psychological studies as I have frequently witnessed them in this case.

In a previous lecture³³ I called attention to the fact that emotions (instincts) innate dispositions and tendencies are fundamental to personality and I pointed out that in abnormal alterations the dissociation may involve one or more of these. Certain of these innate psycho-physiological systems were cited as having been repressed or dissociated in this case. It remains to study this phenomenon a little more closely.

Psychologists are generally agreed that of the emotions some are primary, or elementary, and others are complex, that is compounded of two or more emotions. Fear and anger, for example, are primary and the conscious elements, like all primary emotions, in biological instincts. These instincts serve a purpose in the preservation of the species. Of the complex emotions scorn and loathing may be taken as examples, the former, it is believed, being compounded of anger and disgust and the latter of fear and disgust. There is not a general agreement in regard to all the emotions that should be regarded as primary. Joy and sorrow, for example, are classed by some as primary and by some as complex. I made an effort to note and classify in a tentative way the emotions that were present and absent in the two personalities A and B and have arranged them in the following table. In this table the classification of the primary and complex emotions of McDougall has been followed in the main.

Of course it is very difficult to determine with certainty if any given emotion is absolutely absent, as it depends upon suitable conditions being present for its excitation. An emotion that is repressed might still be excited if the stimulus were sufficiently strong. Still, it is significant that emotions which would ordinarily excite a given emotion, say, tender feeling, or sorrow or fear, in the ordinary normal person, or did do so in this subject in the A personality, did not do so in the B personality, or would awaken in the latter only an emotion of joy or mirth. Under these circumstances, when the A and B personalities respectively came into being, these differences were easily observed, and it is noteworthy that then certain emotions were never in evidence in each respectively, whether potentially present or not.

³³Lecture III.

It is interesting to note that when a primary emotion was absent, for instance in personality B, that a compound emotion which included this primary emotion was also absent. It is obvious that dissociation of personalities in which certain emotions are repressed offer valuable data for studying the problem of the classification of emotions, more reliable than do the usual methods of introspective analysis.

PRIMARY EMOTIONS, INSTINCTS, FEELINGS AND INNATE DISPOSITIONS

	A Personality	B Personality
Anger	Present (marked)	Never observed, although sometimes she felt "provoked"
Fear	Present (marked)	Never observed
Disgust	Present (marked)	Never observed
Hunger	Slight	Absent (?)
Sexual	Present	Absent
Curiosity	Present	<i>Present</i>
Joy	<i>Absent</i> (Present only when excited by suggestion)	<i>Present</i> (marked)
Sorrow	Present (marked)	Absent
Parental, Tenderfeeling, Affection, etc.	Present	Absent
Self-assertion — Elation	Present (in pride)	<i>Present</i>
Self-abasement — Subjection	Present (marked)	Absent
Play	<i>Absent</i>	<i>Present</i> (marked)
Pleasure-feeling tones	Rare	<i>Constant</i> (marked)
Pain-feeling tones	Present (marked)	Absent

COMPOUND EMOTIONS

	A Personality	B Personality
Admiration	Present	?
Reverence	?	?
Gratitude	Present (marked)	?

Scorn	{ Anger Disgust	Present (marked)	Absent
Loathing	{ Fear Disgust	Present (marked)	Absent
Envy		?	?
Reproach	{ Anger Tender- emotion	Present	Absent
Jealousy		Present	Absent (?)
Vengeful emotion		Present	Absent
Shame		Present	Absent
Bashfulness		Present	Absent
Pity		?	Absent
Happiness		<i>Absent</i>	<i>Constant</i>

As there were differences in emotions and pleasure-pain feelings manifested by the two personalities, so also the emotions and feelings organized with the same objects differed. That is to say, one and the same object often awakened different emotions or feelings. For example, the moon excited in A pain, in B pleasure; woods excited in A apprehension, in B pleasure; a lake, in A fear, in B joy; relatives, in A affection, in B indifference. Situations, too, that gave A sorrow, gave B joy, or, it might be, pleased A and bored B. Likewise with persons: Y—aroused intense hatred, scorn, ect., in A; in B pleasant feelings.

To return to the behaviour of the B and A personalities; the B system, from the fact that it had become for a month, during the third period, segregated as an independent and autonymous system, had become crystallized and easily dissociated as *a whole* from the remainder of the personalities. The same happened with the A system after it had become emancipated as a result of the fourth shock. The two systems readily changed with one another and I had innumerable opportunities of observing the changes taking place before my eyes and of studying them. C makes the following statement of these alternations.

Shortly after I came to you I began to alternate more frequently between those two states, and it is well to emphasize that one marked change in the state of A developed. In this state I now had *complete*

amnesia for my whole life as B; for everything I thought and did.³⁴ In other respects, however, these states were identical with what they had been. The presence of amnesia made no difference in the fact of change of personality. As I see it I was just as much an altered personality before the amnesia developed as afterward. As B, I had no amnesia.

The amnesia made life very difficult; indeed, except for the help you gave me I think it would have been impossible and that I should have gone truly mad. How can I describe or give any clear idea of what it is to wake suddenly, as it were, and not to know the day of the week, the time of the day, or why one is in any given position? I would come to myself as A, perhaps on the street, with no idea of where I had been or where I was going; fortunate if I found myself alone, for if I was carrying on a conversation I knew nothing of what it had been; fortunate indeed, in that case, if I did not contradict something I had said for, as B, my attitude toward all things was quite the opposite of that taken by A. Often it happened that I came to myself at some social gathering—a dinner, perhaps—to find I had been taking wine (a thing I, as A, felt bound not to do)³⁵ and what was to me most shocking and horrifying, smoking a cigarette; never in my life had I done such a thing and my humiliation was deep and keen.

The bearing of amnesia on the principle of multiple personality, perhaps, needs a few words. From the facts as they developed in this case it must be obvious that the presence or absence of amnesia in no way affects the reality of altered or secondary personality. B was quite as much a personality before the development of amnesia as afterwards. Before this appeared the patient as A in no way differed in characteristics (other than amnesia) from what she was afterwards, and the same is true of B. The amnesia simply made the contrast between the phases more obtrusive; that was all. If, therefore, following the amnesia each phase can be rightly interpreted—and of

³⁴This came about in the following way: One day while A was in hypnosis she suddenly and spontaneously changed to a different hypnotic state characterized by change of facial expression, manner, speech, etc. It was afterwards recognized that this was the B personality in hypnosis. I had not before seen or heard of the B personality as such. I had only known that the subject from her own account had been in a neurasthenic condition and had been through periods of improvement and relapses. I did not suspect that these phases of improvement and relapses represented phases of personality such as was soon discovered to be the case. A few days after the B personality had appeared in hypnosis this phase spontaneously waked and alternated as it had previously done, with the A complex. But now, as the writer says, there was amnesia on the part of A for B. The explanation for this is undoubtedly to be found in the fact that a new synthesis and more complete dissociation of the B complex had taken place through the experience of hypnosis. Analogous phenomena I have observed in making experimental observations but it would take us too far away to enter into this question here.

³⁵During the first weeks of my existence as B I pledged myself to drink no wine. The promise was made under such conditions that no reasonable person could have felt bound by it. As B I realized this and felt no obligation to keep it but as A, I could not feel so, though you had assured me over and over again that I was not in honor bound.

this there can be no doubt—as a dissociated personality, the same must be true of it antecedent to loss of memory. Each phase had lost and gained certain traits and peculiarities, and what one had lost the other, to a large extent, had retained.

An analysis of the previous life history shows that each represented a constellation of mental complexes created out of the formative matter of the past conserved in the unconscious. On the other hand it is obvious that from another point of view each, before amnesia occurred, was rightly entitled to be considered as a highly developed “mood” with strong conative tendencies. In principle the amnesia does not affect the point of view. One frequently sees in lesser degree such moods in so-called normal people of a certain temperament. They are in fact really temporary alterations of personality, though it is not customary to speak of them as such. After amnesia develops the conditions in other respects are in no way changed. If such alterations of personality are combined with a neurasthenic condition it is customary to regard the phase as one of neurasthenia or hysteria, and, in fact, the state A was for a long time so regarded until the other state, B, was discovered.

It is not within the scope of this study to describe in detail the behaviour of the two personalities A and B. Enough has been said to show that they differed in character so widely as to appear to be two entirely distinct persons, with contradictory traits, desires, feelings, points of view, habits, manners, temperaments, and attitudes towards their environment and towards each other. Alternating as they did, the situation in which A, at least, was placed were often dramatic and comparable to that of the case of Miss Beauchamp³⁶ with which some of you may be familiar.

A good general idea of the two personalities and their behaviour has been given by the subject herself in the two articles from which I have freely quoted. For further details I would refer you to those accounts³⁷ which merit careful study.

Nor can I take up that phase of the problem of dissociation which involves *coconscious* systems of thought. It is too large a subject and must be reserved for a later occasion. I will merely say that when A became *unaware* of the *B complex* and became amnesic for her alternating life as B, the latter, B, continued during the A phase; or, in other words, the *coconscious* life was a continuation of

³⁶Prince: The Dissociation of a Personality, Longmans, Greed & Co.

³⁷My life as a Dissociated Personality, *Journal of Abnormal Psychology*, Vol. III, Nos. 4 and 5.

the B alternating life after the change took place to A (or C), but the latter was unaware of it.

This seems very difficult to comprehend for those who are not familiar with the phenomenon. Yet, as I see it, the mechanism and principle are very simple and the phenomenon is only an exaggeration of the normal. Otherwise and without a normal mechanism it could not occur. B has also given in her account a very valuable description based on introspection of the coconscious life. This merits careful study.

In later lectures we will study the psychogenesis of the different personalities in the case of Miss Beauchamp. In the published account of this case this aspect of the problem was not included but was postponed for a later occasion.

REINTEGRATION OF A AND B INTO A NORMAL PERSONALITY C

You probably will have sufficient curiosity to want to know how the reintegration of the dissociated phases into a single normal personality was accomplished: that is to say how a cure was brought about and the original personality was obtained. It was very simple and can be told in a few words. The method was the same as that employed in the case of Miss Beauchamp.

Each of the dissociated personalities A and B could be hypnotized. When A was hypnotized she went into a state which we will call *a* and when B was hypnotized she went into a state which we will call *b*. Now both these states could be still further hypnotized. When the process of hypnotizing *a* was carried further a state was obtained which we will provisionally call *x*. When the process of hypnotizing *b* was carried further a state was obtained which we will call provisionally *y*. Now, when studying these two hypnotic states, *x* and *y*, they were found to be the same state. That is to say they had the same memories and other traits of personality. Furthermore they were found to be a combination of both *a* and *b*, possessing all the memories, emotions and innate dispositions which were lost in A and therefore possessed by B and all those that were lost in B and therefore possessed by A. In other words, it was the complete normal personality but in the hypnotic state. This hypnotic state, therefore, which had been previously labeled both *x* and *y* was now labeled *c*. All that remained to do, therefore, was to wake up *c* and the trick would be done, for we would then have, theoretically, the normal C personality. So this procedure was carried out and the normal personality was obtained.

APPENDIX

And now after this serious and, I fear, dry analysis, may I end with a bit of fun—with some verses which I borrow (without permission but with profuse thanks, in advance) from our esteemed contemporary "Punch" who under date of February 24, 1909, printed the following apropos of the B. C. A. case, the subject of our study.

A AND B

(In the Journal of Abnormal Psychology is described the case of a lady who, owing to nervous strain and shock, became two different personalities which suddenly alternated with each other. The two states she called A and B. As A she was a pattern of propriety; as B she enjoyed doing what she knew would annoy herself as A.)

A. Whenever I am A
The perfect saint I play;
My virtues are noted,
And I am devoted
To doing good works all day.
My spirit stands aghast
At anything that's fast,
And I shrink from the host of
Bad people who boast of
A purple and lurid past.

A proper and prim young girl,
A hair-very-trim young girl,
A chaste, unemotional, highly devotional,
Terribly grim young girl.

B. Whenever I am B
I am the very D,
Delighted in joking
And cigarette smoking
And having a rare old spree.
I dance the night away
In haunts that are bright and gay,
And joyfully revel
In playing the devil
And shocking myself as A.

A giddy and glad young girl,
A boisterous, mad young girl,
A daring, high-kickery kind of Terpsichore,
Almost a bad young girl.

A. A highly correct young girl,
An ultra-select young girl,
A pink-of-propriety, Dorcas-society,
Most circumspect young girl.

B. A very alert young girl,
A cheeky and pert young girl,
A rackety, rollicking, merrily frolicking,
Bit-of-a-flirt young girl.

A. An omnibus-ride young girl—

B. A straddle-astride young girl—

A. A strict Sabbatarian—

B. Thorough barbarian—

A. & B. Jekyll and Hyde young girl.

A DIVIDED SELF

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THE following is a brief report of a case of dissociation. It has some features of interest to students of abnormal psychology. I shall refer to this divided self as A and B. Although A has been changed in some ways by the dissociation her memory is continuous with the original self. B is a secondary personality.

A is a woman twenty-nine years of age, the fifth of a family of six children, all living. The father was fifty-six at the time of his death. The mother is still living. The mother's side is negative. The father, an habitual drinker, committed suicide. One brother has reputed "psychic powers." A, while not robust, has no organic trouble. As a child she was very emotional, high-tempered, and much older in manner than her years. She has never had any serious illness. Her height is five feet, and she weighs eighty-one pounds. This is seventeen pounds under her maximum weight. At present she is a saleswoman, and is considered a good one.

B's appearance as an alternating self began about three years ago. The change was, at first, accompanied by brief trauma. This has now disappeared, and the change is generally made without disturbance. The transformation produces a marked change in the face and bearing. Respiration is deeper, and goes from eighteen to twenty. The body is slightly flushed, and the eyes are brighter. The expression of the whole face is altered. Her manner is vivacious and aggressive. The timidity of A is replaced by the utmost confidence and self-assurance. Although A may have been fatigued no trace of it will be seen in B. Indeed I have never known B to show any signs of weariness. After A has come home utterly exhausted, too tired to eat, B has come, eaten a hearty dinner, and enjoyed the evening. This new influx of strength is, in itself, a nice study, and affords further evidence of James' and Sidis' doctrine of various levels of energy.

The cause of the dissociation was, undoubtedly, a shock which A received from the tragic death of her father. A loss of coördination followed this event, and for a while she was hardly able to walk. It was, as she says, "Like learning to walk again." At this time hal-

lucinations began to appear. Further, according to B's statement, it was at this time that she secured partial control of the body. The behavior of A, from that time, shows noticeable signs of instability. She was subject to moods of extreme vanity, and occasional bits of conduct which were to her, at the time, inexplicable, such as, without intention, getting out of bed and going through weird dances. Many things occurred during the years that followed that now clearly show that a well-organized subconscious complex was formed, and that, at the time, it exerted a dominating influence. It was not, however, until A was twenty-six that she learned of B's existence, and then what little she knew was shrouded in mystery. I give A's own account of the incident. "One evening while alone in the house I was seated at the piano, and it seemed like something said to me, 'take a deep breath,' and a sound of singing came from me that I had never heard before, and it frightened me. Just before the song I shuddered as if something had possession of me. I went to the kitchen to get a drink then, and I asked mentally who that was that sang, and I got the name ——." It was several weeks, however, before B learned, to use her expression, "to get completely out," or to submerge A, and take full possession of the body. Since that time they live as alternating selves. If A is abstracted B may appear. Generally A's consent is required, but sometimes B will catch her off her guard and be "out" before she knows it. Much as she desires to come she has a dread of meeting awkward situations, and as a result of this fear she leads a very restricted life. In the immediate household A's mother is the only one that has seen her. For a year A was completely mystified by the strange appearance. B had announced herself as the reincarnation of the soul of a Spanish woman, and this claim was, in a way, accepted by A. After hearing a voice that was not her own, and singing in a tongue that, as we shall see more fully later, she could not understand, what else was there for her to believe? Thus neither A nor B thought of themselves except as completely separate personalities, A assuming that B on occasions took possession of her body. In this she was confirmed by some spiritualistic friends who became greatly interested in her. B's own idea of herself, that is her belief that she was a returned spirit, was also, of course, encouraged by this atmosphere. Over this coterie of believers B exerted a tyrannical influence and in every whim she was indulged.

Each, if interested, is conscious of, and remembers what the other does. When subconscious A plays the role of an onlooker, but

is powerless to determine B's conduct. Frequently conversations are carried on between them. In this case an inner voice expresses the thought of the self that, at the time, happens to be subconscious. B when subconscious may, if she chooses, profoundly influence A, whereas A as subconscious leaves B comparatively free.

A is a bright cultivated woman, of a good family, and when young had all the advantages that money could give her. B is older in manner, more dignified and serious. She has read Sally Beauchamp, Prince's Volume on the Unconscious, and several works in the field of abnormal psychology. These she reads with ease and understanding. She also expresses herself with great clearness. She is acquainted with my own analysis of her case, and has helped in every way she could. Yet notwithstanding her ability to follow a psychological analysis, after a full statement of the case she retains unmodified her conviction that she is a reincarnated spirit, and that she lived and died long ago. What seem to her to be memories impose themselves upon her, and prevent her from *feeling* that any other explanation can be true. A, however, now understands enough of the case to know that B is a dissociated self, and much of her past life, hitherto strange to her, has become clear.

One of the interesting things about this case is B's speech. Her English has a marked foreign accent, and has had from the first. The accent is Spanish. Now at no time in her life has A studied a foreign language, nor has she ever been intimately associated with Spanish-speaking people. Not only does B's English have an accent, but at times she speaks automatically in a "tongue" that is made up entirely of fragments of Spanish, with traces, possibly, of Italian. She also writes it automatically. When spoken it is generally accompanied with imagery and strong emotion. B was amazed when she first learned that she could not translate it into English. I here give a sample of this "speech." It was written automatically.

"El spir desempenarsa Maria Rozell Rosa si exusadosa los almos los limasa los immundosa Palaisa Rayals Madrid Espana ple none dusa duer Reyos Ferdinando III si del hombri carcela mito De Grandoza espio del Reyos Ferdinando III los padre houerta el santa virginus bella almos fuami del pico si questa monos si cruir v los mendato spirato del prego duosa fuar cristes felami Reynos Carlos Naples Italy Carnaval des bella in carles aquellas Romitas Ferdinando III. castilliuanos reynos immortalidade almos del maria Rosa los spir-

anosa del uberia costa quelle di si amicos zeus romanian alesticad pon che nome fluer yoso dente quami."

The source of this "tongue" has so far not been definitely determined. Repeated hypnosis of A and B fails to reveal anything conclusive. At a Catholic school which A attended when a girl there were three pupils from Mexico who spoke Spanish. A says they were not friends of hers and that she did not associate with them, but that she can remember she was thrown with them when taking lessons, and that during these hours these girls sometimes conversed among themselves in Spanish. This would have afforded an opportunity for A to have unconsciously assimilated their speech. And it may be possible that it is this, that twelve years later, appears in garbled form in B's automatic speech. This, to some extent, is confirmed by the fact that when B was put under hypnosis and taken back to the convent days she began using the "tongue." But as it is apt to be used in certain levels of hypnosis, it is difficult to say whether the convent association has any necessary relation to the speech. It would, however, tend to prove that its source belongs to the period of the years at the convent, that is, it is found in that stratum of the subconscious. It is true that this period antedates the shock. A's convent life ended with the death of her father. However the history of A's childhood shows, I believe, that a condition of nervous instability was then present, and that the shock merely sundered associations that were already only loosely organized. But the difficulty with the above hypothesis as to the source of the Spanish "tongue" is that B's whole character has been molded by the Spanish idea. She is in all of her tastes and preferences foreign. The idea that she is Spanish saturates her. She is even fond of dishes that are, or that she images to be, Spanish, and no dark complexion escapes her. And this idea embedded in B as a subconscious or co-conscious complex has resulted in her absorbing an enormous mass of stuff more or less Spanish in character. Most of it A, of course, is unconscious of ever having heard or seen. Like a magnet subconscious perception has picked up everything that is congenial to it. Out of this mass, after due incubation, has evolved the strange fabrications which when they enter B's consciousness impose themselves upon her as memories, and when they appear they are heavily charged with feeling.

Now for this deep-seated desire for things Spanish more than a casual motive must have been at work. Nothing, so far, of an adequate nature has been found in the convent period. It is this fact

that leaves that hypothesis incomplete, if not false. Shortly after the shock, however, something that might have supplied the interest occurred. In fact when the psychology of B is considered no motive could be stronger than the one that then arose. It was then that A made the acquaintance of Mr. X, a man many years her senior, and for whom for some time there existed a strange fascination. Mr. X was a man strongly Spanish in appearance, and his mother was a Spanish woman. This friendship is now clearly recognized by A to have been B's affair, and this B admits, and generously exonerates A from all blame. That is, B, at the time existing only subconsciously, so dominated the behavior of A, in this instance, that the affair really belongs to her. As this was the period of B's growing dissociation the influence of Mr. X upon her character can probably not be exaggerated. It could scarcely have been otherwise. In many subtle and profound ways she was shaped by it, and of this there is ample proof. And it may be that as a means of explaining this bond of affinity the idea occurred to B that she must be of Spanish blood. Once rooted the idea would shape all in conformity to it. What adds weight to this possibility is the fact that the sex impulse was a central factor in the dissociation. There was a strong tension here, and when the shock came it formed the line of cleavage. Once removed the sex complex became the dominant one in the new group. Thus freed it acquired new strength. In B its influence is persistent and pervasive. She now imagines that when she lived before she was a large and powerful woman, whose passionate nature played havoc with many a lover. For the frail body of A she has nothing but contempt. She cannot get adjusted to A's fragile organism, her imaginary one is far more real to her. In hypnosis this fancy of B's becomes an hallucination, and she sees herself possessed of all the feminine charms. In A's body she says she "feels like a lion in a bird-cage."

Now the circumstance in which this passion was cultivated, and which in turn produced this imaginary body, would, naturally, be the one in which to seek for the clue to the speech. Mr. X's appearance and Spanish blood are the elements in the situation which, in that case, would have tended to develop B in that direction, and would furnish a motive for the use of the "tongue." The actual source of the "tongue" itself, that is, the exposure to the spoken Spanish, would then be an additional problem. I say an additional problem, for according to both A and B Mr. X never spoke a word of Spanish. This may appear to be putting too much trust in their veracity, but as

neither has, to my knowledge, ever shown a disposition to lie to me. I am inclined to believe that in this instance they are telling the truth.

So much for the language of B, and the admittedly inconclusive character of the data thus far uncovered regarding its origin. I now call attention to another outstanding feature of the case, and one no less interesting. A does not sing, or sings so poorly that the above statement really needs no qualifications. B not only sings but sings well. Her voice, according to a conservative critic, a well-known musician, and a teacher of voice, is a good one. His judgment, as he expressed it to me, was "Her voice with training would earn her a living." In the many cases of disassociation reported I do not recall a phenomenon of just this character. Although there is nothing obscure in the fact itself, that is, the principles involved in the change are not far to seek, still in this instance the change is so radical that it is instructive. The difference in the emotional life of A and B is reflected in the quality of tone, and A's timidities and inhibitions are thrown off when B emerges. She sings with complete freedom and absolute assurance. In her own mind she is a great singer. This, along with the others earlier mentioned, is one of her fixed ideas. In Spain, she says, she used to sing to great throngs. If left to her own inclination she sings in the "tongue," and always with great emotion. When asked why she experiences no embarrassment when singing, her reply was "that after having been accustomed to singing to the multitudes I don't see why I should be embarrassed by a handful of people." This complete ease of B is a source of continual wonder and admiration on the part of A. A is conscious of the singing and hears the tone, but I am inclined to believe that she does not hear them quite as they are. There are reasons for thinking that B's feeling and high estimate of her performance colors the perceptions of A. Hallucination, to some extent, is probably present. This should not be construed as a disparagement of B's real gift.

In this connection it may be said that the perception of the submerged self, and this is true of both A and B, is never quite the same as those received when in the active role. From repeated descriptions of A and B of how the world appears when they are seeing it subconsciously I get the impression that it is the same only less real. B has described it as "seeing it through a window, then going outside." In this manner she says she saw the world for years before she "got out." She describes interestingly how people appeared to her when she first came out, and saw them close up. They seemed "gross and fleshy,"

and gave her the impression of being in a "glare." Even now she has a tendency to squint, and still retains the appearance of being struck with the novelty of things. As subconscious, the content of B's vision may differ from that of A. She may note many things which escape A. She says she has often seen things in a shop window that A did not. Both can read a page at the same time. If when this is done the interest of both is strong, the lines frequently appear double. A reports that her hand has turned the page before she was ready, B having already finished it. When B is near the surface A is conscious of that fact through certain symptoms which have become familiar to her. Then, again, she may go days completely unconscious of her existence. If B, as subconscious, is deeply disturbed, say depressed or angry, A may also experience some distress, possibly some shade of the same emotion, or it may be a general feeling of uneasiness. If B is so disposed she can determine to a large extent A's reactions to situations and people. For example, A against the wishes of B attended a dinner such as ordinarily she would have enjoyed very much. To her surprise and annoyance she found herself disgusted with things in general, and wishing she were elsewhere. She is also capable of creating in A a feeling of dissatisfaction for a friend of long standing. These statements are based upon instances for which B later confessed full responsibility.

The best illustrations of this transference of emotion is found in the way in which B can, at will, affect A's passion. Generally A is almost completely without it. This has been true only since B's appearance, and it has been a source of much gratification to A. B can immediately transfer the full force of it to A, and she holds it as a choice threat over her. This, according to A, is the strangest of all of her many strange experiences, and to avoid it she is willing to make any concession to B.

B's memory is in some respects good, even remarkable. Her memory of A's early life is much better than A's. She can describe in detail and with great vividness incidents of A's childhood, things that A is unable to recall. During these descriptions by B, A sees these scenes of her childhood pass before her, reproduced much as they might be in hypnosis. Many of these memories A's mother has been able to verify. It is difficult for B, however, to commit a thing to memory. But if it is A that makes the attempt B gets it with ease. The following experience was told by B, and illustrates a peculiar feature of her memory. After returning from the studio where she had

been learning, with some difficulty, the words of a song, she found herself singing a song that had been sung by another student during the afternoon at the studio. From this it would seem that the marginal impression is apt to be retained more easily than that which is consciously held in the focus of attention.

Unlike many, perhaps most, cases of dissociation each of these two selves is conscious of what the other does, that is, when either appears she is aware of what the other has done. There are thus no gaps in the conduct, and as far as the actual conduct goes there is, therefore, no amnesia. But the inner thought that lies back of an act is known only to the self that performs it. Of this inner life each knows only as much as the other sees fit to reveal. In this regard they are related much like any two friends that know each other well.

B claims she never sleeps. But of the truth of this statement she is, of course, no judge. That she is often conscious when A is asleep, I think probable. To prove that she could thus remain awake, she conceived, at my suggestion, a dream which she was to induce A to have the following night. A later reported the dream. The possibility of explaining this by another hypothesis must, of course, be recognized, namely, that it reappeared to B after the manner of a post hypnotic suggestion, and that it then filtered through into the subconsciousness of A. While this supposition is possible, all things considered, the other, that is, that A did just what she planned to do, seems to me to be the more probable. She offers the following as further proof. A had promised to remain up and let in a member of the family who was without a key. Unwittingly she fell asleep. B, remembering A's promise, awakened her. This, again, is open to several constructions. B's contention, it may be argued, finds some support in the fact that while A is in deep hypnosis she remains a keen observer of all that takes place, and communicates these observations by writing. The one case is, inherently, it seems to me, no more improbable than the other. That proof of the one leaves the other indeterminate is, of course, true, and the evidence for the latter, so far available, leaves something to be desired. A, contrary to what might be expected, is a heavy sleeper, and, so far as she knows, seldom dreams.

In common with cases of this type B manifests an extreme egoism. She is never genuinely interested in anything that does not bear upon her own welfare. The conversation must be centered about her, her past, present, or future. She is utterly incapable of a truly unself-

fish thought or act. When the talk becomes general she drops out of it, and if it is extended, she prefers to disappear. While genial if the situation is to her liking, she is prone to look for hidden motives and meanings. This makes her very sensitive and easily hurt. When handled with care and tact she responds quickly to censure or approval. In the year and a half that I have known her she has never refused a request when seriously made. At times I have had to ask her not to do certain things to A, and in every instance she has followed my advice. A once reported that B had hypnotized her, and this B admitted, and was very much pleased that she had been able to do so. It gave her just the sense of power over A that she very much desired, yet when I explained to her why she must not do so again she desisted, and has not attempted to repeat it.

I have said that the sexual instinct is at the center of the group of associations that constitute B. A says that she thinks of nothing else. That is not quite true, for she is interested in her singing. But sex is never far in the background, and the deeper down you go into her subconsciousness the clearer it becomes that A is not far wrong. A's early training, both at home and at the convent, was one of repression, one that put a strict taboo upon all reference to sexual matters. The result upon A's, at the time, highly sexual nature was to isolate this desire, and drive it underground. When the shock came the breach was widened, and two selves were formed along the lines of the old conflict. Hypnosis confirms this analysis. It uncovers in B a mass of imaginings of the most romantic color. Instead of A's slight figure, she sees herself large and voluptuous, a fascinating beauty. Her story is that she was of humble birth, became a dancer, a courtesan, the mistress of a noble. These hallucinations she remembers after she is awakened, and they seem to her to be memories of a real life.

At one point in the hypnosis a psychological state was discovered that was, probably, originally produced by the shock. B's memories of A's convent days were being searched for traces of the "tongue," when, unexpectedly, she went into a delirium of fear and suffering. Upon entering this state she began to murmur in a half articulate manner in the "tongue," and it was with difficulty that she was induced to tell in English what she saw. She had seen the body of a lover who had taken his own life. So terrifying was the sight that its original appearance, whatever its nature may have been, must have left a deep and profound impression. Two things about this experience point to

the shock which A received by the death of her father. It was in some way associated with the convent period. A's father's death occurred at that time, and the lover in the delirium dies, as did the father, by his own hand. That, in the delirium, the father's death was distorted in this romantic fashion could be accounted for by the fact that in B it encountered a strong undercurrent of sex feeling. The tragedy would thus be given a new setting. For A's father no traces of grief are found, but down in her subconsciousness there is a house of horrors in which lies the body of a dead lover, and even an approach to this spot brings on great fear. The influence of this hidden and distorted complex is seen in the lurid character of B's emotional background.

B's emergence, and life as an alternating personality, has, of course, modified A. It has, as earlier noted, resulted in practically unsexing her. But it has not only modified A, it has also changed, not the character, but the conduct of B. Before she "got out" she reached her ends by dominating A. She thus lived, in a sense, through A. The result of "getting out" and facing the world directly and openly, with the screen of A removed, has been to hedge in her sex impulses. They are there, but they seem to be aroused more by ideas and memories than by actual contact with men. She is sex-minded, and in her speech there is a boldness that often embarrasses A. Knowing her character and influence as a subconscious complex upon the life of A it might be expected that when she emerged as an alternating personality she would be quite irresponsible, and A had, at first, such fears. But these have proved to be quite groundless. In fact A has found that B resents even harmless attentions. She has arrived at the idea that she is A's guardian, and talks much about her superior self-control. In this idea it has been well to encourage her, but her restraint is, in fact, not moral but psychological. In the new psychological setting, that is, B as the dominating personality, this instinct seems disconcerted. These psychological obstructions met in the chronic novelty of the new situation, turn her desire back into imaginary scenes, or force it to find sublimated forms of expression. However this may be, she is, in this respect, a greater danger to A when subconscious than when out and in full control. A more complete and detailed statement of the case than can well be given would be required to appreciate the full significance of the point under discussion.

It is a common thing for these two selves to have long alter-

cations over their respective characters. The drift of B's charges against A is that she is light-headed and without ambition, and that she thinks too much about her health. Whereas A insists that B's claims to a superior character will not bear close inspection. And some traits of B she is loth to believe could belong to a self of which she is any way a part. That B has many admirable qualities she readily admits, and often says that she would miss her very much should she disappear. To enable A to sing she has made many sacrifices. Toward A, B is seldom vindictive, but she never praises her, and I am sure she would express no regret at the news that she had gone. During the period between the shock and B's actual emergence, A was, according to her report, much more nervous than she is at present. And from what I have been able to learn of those years her condition much of the time would have rendered her present employment impossible. The strain on A with B subconscious seems to have been greater than it is under the present *modus vivendi*. As it is, her peace depends upon sharing life occasionally with B. Unless this is done B creates disturbances both mental and physical that are highly undesirable.

All theory and inference aside, the case presents many interesting features. The value of B's accent and "tongue" for the study of subconscious perception and memory is apparent. That some casual and, apparently, indifferent contact with a language many years since should thus reappear shows the possibility of subconscious assimilation, and the way in which these memories have stamped themselves upon the mechanism of speech illustrates the significance of these subconscious processes. And of all that lies back of, and is implied in, the fact that when B uses the voice it becomes a musical instrument, there is much that can be utilized by students of psychology and neurology. The future of the case will be, of course, of interest, and its development will be carefully noted.

SOME PROBLEMS IN SEX EDUCATION*

BY HELEN WILLISTON BROWN, M. D.

THERE are at the present time, two general methods of sex education, which may be roughly classified as the old fashioned and the modern types.

The old fashioned method is to leave the child to get his own sex instruction, through observation, and through channels outside the home,—usually children older than himself, or vicious grown persons.

The modern method is that in which the conscientious mother reads a thousand books on "How shall I tell my Child" and then proceeds to "tell the story," as they say, not only handling the simple subject of birth with gloves, but with thought and prayer as well. The classic result of this information is to overwhelm the small boy with emotion, and he flings himself sobbing into his mother's arms, and says, "Now I know why I love you so much,—because I am a part of you!" This reaction is calculated to throw the psychoanalyst into an extatic contemplation of the Oedipus complex in the making. He may feel that the old fashioned method of leaving sex education to the streets, is a deep, unconscious mechanism, for the holding in abeyance of family ties, since the information gathered from the streets is not calculated to raise a child's respect or love for his parents, whereas by the modern method, every effort is made to strengthen the tie between the mother and child, and to create what seems to be an unduly sentimental bond.

It is noteworthy that usually, even the most up to date mother, while she is capable of taking a sentimental pleasure in telling the child about its relation to herself, will feel incapable of explaining the child's paternity. This, I suppose, could be regarded as a desire to glorify her own position, but it seems more reasonable to suppose it is due to diffidence.

A more simple explanation of the old fashioned method of ignoring or making a mystery of sex things, can be found in regarding that attitude as a reminder from the days of sex worship. As we all know, religion tends to make a mystery of its affairs, in order to keep its hold upon the mind of the people, and though at the present day, sex

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worship has fallen into disrepute, we probably find its influence in our attitude toward sex, both in our tendency to make a mystery of it to women and children, and to make a joke of it among the initiated.

To those of us who have worked as lecturers on Social Hygiene for the Commission on Training Camp Activities, and whose chief pre-occupation for the last two years has been the problem of reducing immorality and venereal disease, the problem of sex education looms very large.

A psychiatrist, who played an important part in the war, has said that since in two years of intensive training, we have turned our peaceful young men into most excellent fighters, it is probable that in one year more of equally intensive and aggressive training we could make them all into pacifists and conscientious objectors. We know, for example, that York, one of the great fighters of the war, had pacifistic ideas until, as he said, the matter was explained to him by his superior officers, and then he easily was convinced where his duty lay, and proceeded to do it.

Now also in sex education, much could, and already has been done, by training.

But some will say, "If you argue for a curtailment in sex license, you are going contrary to human nature."

One might reply to such arguments, that to a certain extent, perversions seem to be not contrary to human nature, that Greek love was devoutly believed in by the ancients, but that at the present time, as a result of change in public opinion, it is regarded with disfavor.

If human nature makes public opinion, so to a large extent does public opinion mould human nature, and men are more and more coming to realize that a man can do those things with impunity in which he ardently believes, whereas those things which he may unreasonably regard as dangerous, will upset him desperately.

Now if we take sex conditions at the present time, from the stand point of a healthy people, and a healthy inheritance, sex conditions are, in the main, extremely bad. Should not human nature,—if it be human nature to behave as people do now,—be given a turn in another direction, by emphasizing the social necessity of change?

Would it not be possible, by educating our young people to the ideas that self abuse is a waste of energy, that relations with a prostitute are often no better, mentally at least, than self abuse, and that it is more detrimental than clever to acquire venereal disease, to make them feel that continence is a healthy state, and sex relations without love, a degraded thing? And if all our young people believed in these

things which do appear to approximate to the truth, would they not then become what we call second nature to them?

Certainly we cannot claim that the world is such a successful place that no change in thought should be contemplated.

In straightening out sex problems, undoubtedly marriage, as it is today, presents many complications and difficulties. It tends to oppress those earnest souls who desire law and order, and it is undoubtedly calculated, by its various requirements and conventions, by its ban on those who openly ignore it, and by the difficulties of attaining to it, to distract and dishearten our impecunious young people, and to turn them either into paths of unsatisfactory hypocrisy or of neuroses. However the problem of sex relations may be finally solved, if that solution is to fit the need, it must provide for the union of young people when they ardently desire it. One may do all that is possible to keep emotion unaroused, but once it is there in force, there is literally hell to pay if it is kept in check too long by social forces.

But returning to the question of educating the children,—how, practically, does the social worker of the present day find them growing up, and how may we work with them for social betterment?

We find the children, as I have said, getting their information for the most part from vicious or sentimental sources.

We find the average boy gets vicious sex instruction by the age of nine years, and he usually gets no other instruction to counteract it. He often is hardly aware that there is any other point of view to be held, or if he hears of possible paths of virtue, he is assured that they are only persued by the molly coddle and the physically or mentally weak, so that even if the path of virtue had naturally any attractions for him, he is often frightened from it.

(One listening to those talk who tend to be promiscuous, is often reminded of the fox who lost his tail, and actuated by jealousy of his more fortunate friends, urged upon them, the desirability of losing theirs also.)

The average young boy is taught self abuse which he frequently practises to an unhealthy degree, with concomitant morbid mental excitement. He is taught by other boys that to go to a prostitute at an early age is the manly thing. His ideas of marriage and the family are degraded to a degree. If he gets by chance a lecture on sex hygiene when he has progressed to college, his mind is often so warped by that time, that he does not believe what he hears, or thinks it is a joke, or if it does appeal to him as sensible, he is likely to be heavily handicapped by his past.

This seems to be the position of the average boy of the present day, and the girl is often in an even more complicated state of mind and body.

Now should we be justified in saying this is human nature, and that therefore there is nothing to be done? It is undoubtedly the way things are at the present time. If however, we accept evolution, we think we have already advanced a good way beyond our simian ancestors, and that there may yet be a long road ahead.

Recently we have learned something of race psychology. We believe there is no more fertile field for the production of neuroses among the timid hearted than to make them feel they are behaving in a way contrary to ordinary behavior. Also we are learning to a certain extent, what kind of education it is that produces the timid hearted or the brave, and just recently the war has brought vividly to light the ancient truth that "As a man thinketh, so is he."

The "enlightened" therefore, have at their command sufficient material for the construction of a new era. The masses will dwell contentedly in the model tenement they may erect.

The obvious thing to do is to start counter education of an unsentimental sort, to react against the degenerate remainders of an ancient religion that has passed its usefulness.

If it were possible, as has been said, to give our young people consistent sex instruction, combined with an understanding of more ideal social conditions, so that they would only think of immorality as an asocial state, would they not cordially fear, and abhor immorality, and would not the neuroses be likely to occur among those who countered the general moral opinion of their fellows?

The practical question is, of course, how we may get rational sex education across to the children. This should be begun, at least, in the home, but the practical difficulties of education through the home only, are enormous because of the ignorance and prejudice of parents, and it would take several generations of sane teaching to do away with them.

The obvious mechanism is that of the schools. At present, in most places there is no sex education in the schools as a regular part of the curriculum, but educators are becoming anxious that such instruction should be given, and there is considerable demand for it, always with the proviso that it be done by "the right person," which means a person qualified by endowment and education to handle both the subject and the children.

To have a cut and dried series of lectures, learned by heart, and given by an inexperienced person, would not be satisfactory. Any

one who has ever lectured to small boys and permitted them to ask questions, knows the very wide range that their questions cover.

It is one of the most exciting things in life to be faced by an audience of small boys who feel they have discovered a mine of information, and who desire at once to have straightened out and explained all the various problems that confront them. It is an exciting experience, and rather heart breaking as well, to realize how keen and simple are their minds, and how much might be done with them if there were time. To have them say "You will come back and talk to us again?" when it is impossible.

We have neglected the children, in this way long enough. Would it not be well for the medical profession to take a hand in sex education, and see that there shall be sufficient well trained doctors to cover the needful work?

A proper program of instruction in the school would begin by teaching the very small children such elementary facts of biology and hygiene as they can comprehend.

The programme should also include work with the Parent-Teachers' Associations, so that what can be done by parents at home may not be omitted.

The school nurse might carry on the instruction in hygiene and sanitary living, and a doctor should give the lectures in sex education. There should be sufficient time for the doctor to have interviews with each child so that he may get in touch with individual problems, and deal separately with each child's particular needs. In my opinion the lectures should begin when the child is young and unspoiled, be modified according to his years, and repeated at least once a year, until he leaves High School or college. In such a way the work of each year would be reinforced by that of the next, and the child could receive along with his sex instruction, sound mental hygiene as well. The good that might be accomplished in this way would be incalculable.

Whether this education should be carried on under the auspices of the State Health Department, or that of the Federal Government, is of course a question to be decided. Probably the State might be best informed of its own particular needs,—but the Federal Government might be able to coordinate the work of the States, and keep them in touch with each other.

If the Psychopathologists desire a means by which to accomplish the healthful intergration of the characters of our young people, they will find no more fruitful field in which to labor than that of sex education.

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BEHAVIOR AND EXPERIMENT IN SOCIAL PSYCHOLOGY¹

BY FLOYD H. ALLPORT

IN THE recent rapid expansion and progress of general psychology one field, it seems, has been sadly neglected and has been allowed to remain in a rationalistic and pre-experimental stage. This field is social psychology. Text-books still cling to the faculties of imitation, crowd consciousness, gregarious and other alleged social instincts. Even the great era of structuralism has left no worthy trace. In spite of florid accounts of mob mind, not one important piece of introspection has been produced to show the influence of the group upon individual consciousness. As for the services of behaviorism, there has been only a schematic notice of social conduct without a really genuine observation. True social psychology is a science of the future; its data are at present unrecorded.

It will be well to glance briefly at the factors which have impeded experiment in social science. The first of these we may term the "fallacy of the group." The group is not an elementary fact. Analysis must go beyond it to the behavior of the individuals of whom it is composed. Concepts, therefore, which denote characteristics only of groups are of little service. In the terminology, for example, of Professor Bentley, "congregate" signifies a body of persons physically associated, "assemblage" denotes a group with only a psychic bond, such as a community reading its morning news or a body of churchgoers anticipating the Sunday morning sermon. Aside from convenience such classifications do not seem to be vital, because as psy-

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chologists we are interested little in forms of social aggregation but much in the social behavior of the individual which underlies all aggregation.

Little more can be claimed for the neat phrase "polarization" used by Dr. Woolbert to characterize the unity of the attention of an audience to a speaker. Such a term forcibly restricts the sphere of the social influence. It also seizes upon the crowd as a whole, neglecting the important fact, to wit, the nature of the response in each individual. The crucial question would be: how does his response when the individual is in the group differ from that when he is alone? Is polarization merely the sum of individual responses, or are there inter-individual adjustments in progress?

The writers cited are merely examples. They by no means stand alone in the tendency of over-stressing the rôle of the group. To trace the fallacy further, one frequently encounters the statement that a crowd or mob under the sway of a leader is a unit. So it is. But this unity from the psychologist's standpoint is accidental. Similar reservoirs of energy have been tapped in the members of a crowd, and there is released a set of similar responses. The result is the appearance but not the reality of unity. The one-ness lies not in the response of individuals to one another, nor even in their participation in a common idea, but solely in their uniform response to the leader. We cannot accept the implication that each mind feels itself a part of one great whole, or that there is a depersonalization of self-consciousness and a rise of crowd-consciousness. The war has proved that the social psychology of the soldier must be studied, not in the crowd phenomena of company or regiment, but in the specific reactions and interactions of persons. Or again, in the present industrial conflict, it is of little value to speak of conflict between groups or classes, each polarized by imitation, suggestion and the like, and motivated by the instinct of pugnacity. True causes must be sought by the scientific method, that is by the scrutiny of individual cases in which direct or indirect social stimulation has produced definite responses.

We may conclude then that the greatest incubus in social psychology is the unwarranted emphasis placed upon the group. We have been so busy talking about group types, group interests, group consciousness, and degree of group solidarity, that we have forgotten that the locus of all psychology, individual or social, is in the neuro-motor system of the individual. There can be no effect at large which is not exclusively an effect upon separate persons. To borrow the

phrasing of an old adage, if we take care of the individuals, the groups will take care of themselves.

Along with group psychology we must banish also categories of instincts which are supposed teleologically to equip the human being for the life adjustments of society. There may well be innate physiological patterns of response which in the interaction between organism and environment develop into perfected life-serving habits; and it is to be expected that these patterns, embodying fundamental drives, will come into play with objects of the social environment. But certainly in no further sense than this are we equipped at birth with mechanisms of social utility. For example, the self-preserving reactions exhibited in anger at the thwarting of bodily movements appear to be innate. They are in evidence very shortly after birth. The new-born infant however is equally angry or pugnacious whether it be a person or a blanket which confines his movements. The only reason why he later comes to use the fighting response toward persons and not toward things is because he has found by trial and error that such a response is effective only toward the former class of stimuli. In like manner self-assertion and self-abasement may be shown, if innate at all, to be instinctive only in physiological pattern and not in social significance. Alleged instincts of gregariousness and imitation are signal offenders in the ascription of nativity to the learned reactions resulting from the play of truly innate impulses upon objects of a social character.

Certain writers, in fact, following the lead of McDougall, have reflected no credit upon the latter by the employment of the psychologically monstrous term "social instincts." We must repeat that the word "social" has no significance except as denoting a certain type of environment and the part played by it in the post-natal behavior of the organism. Professor Dunlap has already pointed out the evil of mixing purpose with scientific explanation. The use of the term just mentioned seems to me a most flagrant injection of teleology into the developing germ cell. The innate equipment of the child, whatever it may be, is individual in every sense of the word; it is only the subsequently learned reactions which may be termed "social." From this we may deduce that for the data and laws of social psychology we must search primarily in other fields of behavior than that of instinctive response. What these fields may be will be discussed presently.

Even at the risk of commonplace we must insist that rationalism

can never take the place of observation and experiment. We must have the individual not in the background of our minds, but directly before us reacting to social stimuli. One observation of a baby's first laugh, or of the early use of language, is worth more than treatises on instinct and emotion. That idol of speculation lauded since Descartes, self-consciousness, must be worked out in terms of the behavior complex. It has been maintained that the consciousness of self, and its formation upon the experience of other selves, are of deep social import. This is seriously to be questioned. Consider, for example the cry of anger in the new-born infant, already mentioned. It is pre-eminently to such an organization of response that the term "self" should be applied. In actual life, whether individual or social, the *consciousness* of self is generally conspicuously absent. Indeed, to determine what causal relation it bears to social behavior is a problem for mystics. Self consists not in reflection but in adjustment of the organism to the inanimate and social sphere in which it moves.

After all this detraction it is incumbent upon us to suggest a program which shall keep social psychology abreast of the times. Shall we not say, then, that social psychology studies those responses of the individual which are conditioned in whole or in part by the social surroundings? The responses referred to fall under two heads: (1) those which are caused directly by social stimuli, and (2) those which are brought out by non-social stimuli, but are modified by the presence of accompanying social factors. At the outset the question arises whether any stimulation is wholly devoid of social aspects, and whether by consequence individual and social psychology can be separated. Professor G. H. Mead has pointed out that social stimuli are at least as early and as important as purely inanimate stimuli in the life of the organism, and that they condition meaning, thought and action throughout life. The interdependence of thought and language again reveals the inextricable social warp in the human fabric. Granting this, is it not therefore still more imperative to trace the developmental course of social behavior?

Genetic considerations aside, we can however discern a rough practical difference between social and non-social objects of stimulation. If I sit down to a meal in solitude, I respond to the food as a non-social stimulus. If however, I were a cat watching the movements of a mouse, or if I were perchance a cannibal cajolling my prospective dinner, then I would be reacting to a social stimulus. It is quite intentional that our two illustrations should rest upon the same under-

lying impulse, the obtaining of food; for social psychology, as stated before, deals not with instinctive drives, but with responses which, although perhaps based upon such drives, are called out selectively by a particular feature of the environment, namely the behavior of other individuals of our own or a similar species. The same innate impulse may initiate two activities which result in securing food; but one of them is material for social psychology while the other is not.

In the examples stated the response is direct; the behavior of one's fellow is the specific cause of the reaction. Suppose, however, I were eating at a dinner party. Then my response to the non-social stimulus (food) would be *modified* by the behavior of the others present. Such behavior may afford an incidental visual or auditory stimulation, or it may exist and be reacted to as a set of attitudes which I *believe* are assumed by my commensals. In any case a modification of conduct is produced by introducing social factors into the environment, and is measurable, as we shall show later, by experimental methods.

We may therefore define social stimulation as the stimulation resulting from the behavior of others which arouses a definite response. And we may recognize, without a claim to sharp distinction, the two types of whole and of partial causation in the response which the total situation evokes. It is my purpose briefly to develop the possibilities of these two types, and, in the case of the latter, to present a summary statement of experimental results already achieved.

To begin with the first, the direct response to social stimulation, we must descend in the animal series at least as low as the arthropods. Professor Hobhouse cites the observation of a hermit crab stalking an insect. The crab approached stealthily from behind, dropping down inconspicuously when his prey showed slight uneasiness or inclination to turn. Here is a case of fine adjustment of action which is not to be found in any of the reactions of the crab except those evoked by animate behavior. Its importance in connection with food-getting is apparent. Ants respond to stimuli from their fellows in very definite ways. There are movements and strokes of the antennae which elicit reactions respectively for food-seeking, for avoidance of danger, and for combat. It is in these specific interactions of lower animals, and not in their much discussed "societies" that we should seek the comparative data of social psychology.

Not only are definite movements and signs effective as social stimuli; we must admit also attitudes or motor settings toward acts or

gestures of a definite sort. The posture of the head, the tensing of certain muscles, the incipient frown or smile—these, as subtle forerunners of acts soon to ensue, acquire high value as social stimuli. Mammals and birds respond to such attitudes in their own kind or in human beings in characteristic ways. An intelligent cat will read and react to attitudes of fear, anger, or affection in a person to whom he is accustomed. Professor Mead aptly describes the shiftings and mutual adjustments at the opening of a dog fight as a “conversation of attitudes.” Handicuffs of boys in play are of the same type. A blow somewhat smarter than usual may arouse a posture or expression of anger, and immediately before overt manifestation of the tendency, there is a response in the assumption of a like attitude by the play-fellow.

Some remarkable cases of social behavior are to be observed in the food-getting activities of monkeys. Dr. Kempf reports a case of strategy in which monkey E used a misleading form of behavior in order to seize food from a wary monkey (D) who countered all other forms of approach by a wholesome suspicion. E would search about in the sawdust of the cage, apparently searching for food of his own, but cautiously glancing back over his shoulder and casually working his way backward as he searched until within grasping range of D's morsel of food. Other monkeys speedily learned to respond to E's strategic behavior; but D, who was evidently a socially stupid monkey, never made the adjustment.

Efficient behavior of this sort is the more remarkable in contrast with the apparent lack of reasoning power in the conduct of monkeys in puzzle boxes, and in imitation experiments. Practically all cases reported show that their method is the primitive one of trial and error in manipulation; and only a few investigators have found evidence of grasping a solution by observing the experimenter's movements. On the other hand, in the behavior of E, there appears a re-grouping and apparently a new integration of simple habits, such as scratching for food, shuffling about, and grasping, which are remarkably well adapted to the solution of a complex problem. Although Dr. Kempf could not ascertain the origin of this trick, it was doubtless either self-originated or learned from another monkey. In either case we find that when the elementary habits of non-social response can be made to serve biological ends as social stimuli, they are organized into complexes for producing reactions in others in a manner closely rivalling the adaptability of human beings.

Many of the earliest adjustments of the infant also are social in character. Actuated by hunger or other basic impulses, babies show a facility in being stimulated by maternal behavior to definite modes of response which far outstrips their adjustments to inanimate objects. At a later age gestures, facial expressions, and words, if connected with infantile interests, enter with astonishing readiness into the action system of the child. How quickly he learns to respond to signs of commendation, disapproval, playfulness, and prohibition! We should recall also in this connection the case of Clever Hans and the social brilliance displayed by so comparatively stupid a species as the horse in responding to scarcely discernable cues of movement afforded unwittingly by spectators.

Facts such as we have been discussing prove that educability through social interaction is earlier and finer than through experience with non-social objects. When stimulus and response are social, the adaption to new and diverse situations is surprising. If we consider intelligence to be the measure of adaptability to new and difficult, but crucial, situations, may we not then attribute to an animal or person a *social intelligence* far in advance of his intelligence in dealing with the world in general?

This viewpoint must be presented with a word of caution. It is not meant that in social intelligence we find nervous or mental operations of a character different from those employed in adaptations of a non-social sort. It must be agreed that the baby learns to respond to the soothing tones of the mother in the same way that a dog learns to associate the sound of a tuning fork with his food. I desire to affirm merely that social stimuli are prepotent at an early age and throughout life, and that they therefore in large measure make possible that life adaptation which we call intelligence.

The social phenomena we have been discussing, namely those directly evoked by the behavior of a member of the same or a related species, can be investigated in at least two ways. The first is by the observation of their genesis in children, and the determination of the first forms of reaction to behavior and the building up of complex social adjustments on the basis of increasingly complex social stimuli, such as movement, expression, attitude, gesture, and sound. The second comprises the experimental study of the individual's reaction to social attitudes, emotional expressions, pantomime and conversation. The field to be sure is vast and the settings difficult of control; but the returns will be commensurate value.

In most summary manner allow me now to refer to the possibilities of the second class of the data of social psychology. In this case a response which is made primarily to a non-social stimulus is influenced by social factors present in the situation. In this category belong the influences brought to bear upon individual behavior by the presence of co-actors in the shop, the workroom, the school, the office, the library, the trade union, the club, and the professional organization. It is the condition also which obtains in the audience or congregation, in public assemblies, and in the crowd and mob. In all these situations the individual reacts directly not to the behavior of the other individuals, but to some stimulus wholly or mainly non-social, such as a task, a book, a lecture, a set of rules, a political speech, or a riot. He is however influenced in that reaction by the overt or implicit evidence of the behavior of the others toward the same object or toward him. In a crowd or audience one finds an inseparable complex of social stimulations of both the direct and the contributory sort.

The fundamental tendencies of incidental social influence are readily open to experimental investigation. It is necessary only to arrange tasks or experiences to be performed or undergone during one set of trials by a number of subjects working together, and in another set by the same subjects working alone. In this way the nature and quantity of social influences upon individual response may be determined. Prior to 1915 practically all research on this problem had been done in Germany by August Mayer, Meumann, Moede, and others. The purpose was not primarily social but to determine the merit of work done by children in school compared with the work done at home, or in seclusion. A short summary of these results may be found in an article by Professor Burnham in *Science*, N. S. 1910, Vol. 31. Mention should also be made of the excellent experiments on social influence by Dr. H. T. Moore and by Dr. A. P. Weiss, already reported at these meetings.

During the last few years I have conducted a series of experiments in the Harvard Laboratory along similar lines. The subjects were adults, and the tests and experiences included multiplying, cancellation, a reversible perspective test of attention, free chain association, thought process in the form of written argument, estimations of weights and of the pleasantness of odors, and emotional influences. The results corroborated those of earlier investigators in the occurrence in the group of a more vigorous exertion of attention and an increased output of mental work in attention tests, multiplying, writ-

ing associations, and producing arguments, than occurred when the subjects worked singly. There was a tendency also for the superior individuals to be less favorably influenced than the inferior by the stimulus of the co-workers.

In the association tests there was a decrease in the number of associations of the personal, or ego-centric sort written in the group condition, together with a more frequent reference to objects in the immediate physical and social environment. Whether this fact indicates again a response in the nature of a social attitude is not certain, but it is a suggestive possibility.

One of the most interesting results was brought out in the social influence upon judgments. Both affective judgments (i. e. the estimation of odors) and non-affective, such as weight estimation, were characterized in the group by an avoidance of extremes, both high and low. Extremes of a graded series were estimated more conservatively in the group than when judging alone. The explanation that this fact results merely from distraction is disproved by the further result that in the case of weights, where precision could be determined, the judgments were equally accurate together and alone. Here again there appears an attitude or tendency to response characteristic of behavior influenced by concurrent social stimuli. The precise cause of this attitude of social conservatism, and its genesis and individual variation, are probably significant problems in the field of direct response to social stimuli.²

The experiments which have been described deserve attention mainly as pioneer ventures into a field which by reason of its daily familiarity in human experience has been too much taken for granted and too little explored or understood. Many more experiments are required in which the type of common task or experience and the number, character, and mutual relations of the individual subjects can be instructively varied. In summary, the time has come to abandon speculations about types of groups, social organization, self and crowd consciousness, instinct and imitation. When social psychologists focus their attention upon the behavior of the individual under direct and incidental stimulation from the behavior of others, then the most vital questions of the social order will find their solution.

²The results of these experiments are soon to be published in detail as a series of articles under the general head: "The Influence of the Group."

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ARE THERE ANY INSTINCTS?¹

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THE conception of instinctive activities is a fairly definite one in general psychology, and we may without hesitation accept it as it is generally understood; namely, as designating any responses which have not been learned.

The conception of *an instinct*, or of *instincts* is however a very confused one, and recent texts show great vacillation in the application of the term. Some authors apply the term to what Warren in his recent classification² lists as *instincts*, and also to what Warren lists as *reflexes*. Some authors restrict the term to groups of activities which are unconscious: others insist on consciousness as one of the specific differentia of "instinct." In most cases, it is assumed that "instinct" does not involve volition: but I do not think all authors would agree to this restriction. I refrain from introducing pertinent illustrations solely because I do not wish it supposed that I have more pointed objections to certain methods of treatment than I have to a great many others.

The greatest confusion of all results from the failure to distinguish between the instinct as a group of activities *teleologically* defined, and the instinct as a *physiological* group. It makes considerable difference whether, for example, we consider the "feeding instinct," as made up of the activities which result in food being secured; or consider it as a certain physiological group of activities which we may name from its most characteristic result, but which is defined by its actual reaction characters, and in that way distinguished from other physiological groups.

The confusion may perhaps not be an important matter for general psychology in its present state of development. Certainly, the presence of the confusion in some general texts seems to have no particular bearing on the further work in these texts. In social psychology however, the term is capable of great abuse, and is decidedly dangerous unless applied in a carefully considered and standardized

¹A paper presented before the American Psychological Association, Cambridge, Mass., Dec. 29, 1919.

²Psychological Review, 1919, Vol. 26, pp. 197-203.

way; and it is from the point of view of social psychology that I am here approaching the topic. I am not concerned for the present as to whether the "instinct," as defined, shall turn out to be conscious or unconscious; or whether if conscious, it is volitional or non-volitional: I am concerned simply with the question of the definition itself; whether it is to be teleological or physiological.

The term "instinct" might be applied consistently, as it is applied at times, to a certain definite group of muscular and glandular performances—a form of behavior, in one of the various meanings of the elusive term "behavior"—resulting from a definite stimulus or complex of stimuli. The concatenated movements of the muscles of the face, throat, and viscera, with attendant glandular changes, which make up the sucking reaction of the infant: or the disposition to make these movements upon certain stimuli: might very well be designated as "instinct," regardless of whether consciousness or volition is involved, and quite apart from the fact that the reaction may be useful. That there are "instincts" in this physiological sense of the term, I suppose no one could deny: certainly I shall not deny it. But it is very difficult to adhere to this meaning of the term, if we may judge by the procedure of the various authors who deal with the topic, and I am very strongly convinced that it is not at present possible to secure agreement to confine the term to this meaning.

At any rate, I propose to join in the neglect of the physiological use of the term, and formulate the inquiry to ask whether there are "instincts" in the teleological sense—the sense in which the term is used in McDougall's *Social Psychology*.

In the teleological use of the term, as I have already indicated, the activities are grouped and classified in accordance with the results obtained in the outer world, physiological and psychological groupings being largely neglected, and where introduced, being always subsidiary to the teleological groupings. Thus; the "instinct of flight" includes all those activities which result in a get-away from a dangerous locality: the "instinct of repulsion," all those activities which remove something from the animal's environment: the "instinct of curiosity" includes the activities leading to examination: "pugnacity" includes the movements which eventuate in combat: the "parental instinct" is the sum of the activities which result in the care and protection of the child: the "instinct of reproduction" includes those activities which result in the propagation of the species: The "gregarious instinct" is the composite of activities which result in forming a herd and

holding it together, and so on through the list. (Of course I mean that the tendency to these activities constitute the "instincts," but the shorter expressions are not misleading).

This teleological grouping of activities under the concept of "instinct," so forcibly represented by McDougall, is apparently widely accepted, and so thoroughly fixed that there is little possibility of using the term in any other way. In discussing the question whether or not there is an "instinct," as a usefully discriminable entity, we are therefore not denying the physiological grouping previously mentioned. Nor are we denying the possibility of a psychological grouping: such may be discoverable, although no one has so far made any serious search for it. New terms will have to be found for these groupings.

The grouping of activities into "instincts" may be admitted to be a useful procedure, if it be clearly understood to be a device of convenience only, similar to the arrangement of documents in a well ordered filing system. Just as there may be different filing systems for different purposes, so different classifications of "instincts" are useful, if they are not misunderstood as being anything more. We may classify "instincts" under two, four, twenty, or a thousand headings, according to the particular purposes we have in view, and may then use another classification for another purpose.

The constant tendency in social psychology is to consider these convenient groupings, arbitrarily made, as if they were series of natural and generic distributions on the psychological level, and to deduce a set of important deductions from the classification adopted. Having posited a "pugnacious instinct," for example, one writer proceeds gravely to infer that war is forever a necessity, as the expression of this "instinct." Controversy over the hypothetical "moral instinct" is another illustration of confused procedure. As a matter of fact, there is or is not a "moral instinct," according to the plan of the author. If it is deemed useful to segregate, in the outer world, certain effects which are to be named "moral"—and this segregation can unquestionably be made—any unlearned tendencies which contribute to these effects, legitimately make up a "moral instinct." If the classification of effects as "moral" is not chosen, then of course there is, for the author choosing, no "moral instinct." Again; if it is advisable to distinguish between the mere process of copulation and the processes of conception and birth, there is an "amatory instinct," distinguishable from the "reproductive:" otherwise there is not.

The impossibility of considering the teleological classification of

"instincts" as more than a matter of convenience, is shown by the overlapping of the "instincts." Even the teleologists point out that "pugnacity" arises from other "instincts." As a matter of fact, there are very few actual responses of the animal which do not form part of a number of "instincts," whatever the system of classification. The same physiological activities, and in part the same conscious processes, are involved, in primitive man, in pursuing a deer for food, and in pursuing a female for amatory purposes. In other cases the same reactions may now be classed as mere "flight," now as manifestations of "gregariousness," now as manifestations of "self abasement." The same fears and perhaps the same desires may be involved in several cases.

I am sure that all the activities, physiological and psychological, of which the animal is capable, participate at some time or other in the expression of the "reproductive instinct." By taking the teleological "instinct" as if it were a psychological or physiological entity, the Freudians accordingly arrive at the grand conclusion that there is nothing in the animal world but "sex instinct." The reactions shown by a child may later be utilized by the "sex instinct." Hence, it is assumed that in its first appearance, the reaction is "sexual." In stating that serious results flow from the confusion of the teleological and the psychological points of view I am not theorizing, but referring to plain and deplorable matters of fact.

The present tendency to develop social psychology on the basis of a classification of "instincts" results in as many kinds of social psychology as there are classifications: and the possible number is legion. By assuming that some preferred classification represents an ultimate list of essentially different units, a psychologist is enabled to develop a system which is in reality nothing but a logical deduction from the assumptions made in the list adopted. Each system may be as logically perfect as any other. In the same way, Euclidean geometry, hyperbolic geometry, and parabolic geometry, each legitimate and exclusive of the other, are built up, each on its definite postulates. As an illustration of this sort of construction in social psychology we may compare Trotter's *Instincts of the Herd in Peace and War* with McDougall's *Social Psychology*, and with the Freudian system. One might go further, and consider the less sharply drawn systems resulting from the assumption of moral and religious "instincts." If an "instinct to imitate" be assumed, still different systems result.

The consequences of carrying over to psychology the teleological

conception of "instincts" are much complicated by further assumptions concerning the role of consciousness, and of volition. We might examine the deplorable consequences of this complication in child psychology, where, if possible, the confusion is even worse than in social psychology: but it is better to deal with the more fundamental fallacy, and settle it in such a way as to abort the fallacies based upon it.

With teleology as a method, we need have no quarrel, and we should not lightly underestimate its importance. Perhaps it may be of far greater value than psychology. Perhaps there is no such a thing as social psychology. But if so, let us call the topic by some other name, and cease to delude ourselves into accepting it as psychology. Personally, I am inclined to favor the belief that a social psychology may be developed. In such a science, teleological methods may legitimately be employed, if properly labeled, just as physiological methods may be. One must however beware of a teleology masquerading as psychology, even though it utilizes a great deal of psychological material, and employs some psychological methods.

Accepting the term "instinct" in the sense in which it is most emphatically used at the present time, we must conclude that for psychology there are no "instincts." There is a great deal of *instinctive activity*, both conscious and unconscious, and probably both volitional and non-volitional: instinctive perceptions and thoughts no less than instinctive acts and emotions. These activities may well be considered in their physiological groupings, and possibly in their psychological groupings, if such groupings are discoverable. I am at present inclined to think that the possibility of discovering social psychology rests upon the possibility of discovering psychological groupings of instinctive activity: and neither of these discoveries is likely to be made until we cease talking of "instincts."³

³There is of course no objection to the use of the term *instinct* in the general sense, just as we use the general term *intelligence*. The objection is to using the expressions *an instinct* or *instincts* to indicate anything except a classification for purposes of convenience, or else in a distinctly teleological sense.

BABINSKI'S THEORY OF HYSTERIA¹

BY MORTON PRINCE, M. D.

OF RECENT years, and particularly as a result of the experience in this war, there has developed amongst French neurologists, under the teachings of Babinski, a reaction against the classical conception of hysteria of Charcot and his school. This present tendency, or rather the present concept which is in vogue, is to regard the classical symptoms such as paralysis, an-aesthesias, convulsive seizures, etc., as artificially manufactured by the physician or the environment through the influence of suggestion and not as essential manifestations. In this view these manufactured symptoms are identified with hysteria and consequently hysteria becomes nothing more nor less than a group of suggested symptoms. It is claimed, that under the influence of this point of view and clinical method of approach, hysterical manifestations are much less common than formerly in neurological wards, and that during the long continued neurological experience of this war this particular kind of war psychosis, or so-called shell shock, was finally largely controlled and diminished in frequency. I think, also, it is true that this conception of hysteria towards the end of the war largely permeated English thought and dominated the point of view of English neurologists who were engaged in the treatment of war psychoses. This reaction, as I have said, has been due to the teachings of Babinski, who for many years has insisted that hysteria is nothing but the product of suggestion, and therefore an artificial psychosis. I propose to examine Babinski's thesis and the evidence upon which he relies for his inductions.

Babinski² begins by dividing the phenomena of hysteria into two groups: First, those "accidents" which have "the common characteristics of being capable of being reproduced experimentally by suggestion" which he avers is "capable of determining the form, the intensity and the duration of them." And, correspondingly, they can be made to disappear by the influence of persuasion or suggestion.

¹Read at the Meeting of the Boston Society of Psychiatry and Neurology, December 18, 1919.

²*Hystérie—Pathiatisme et Troubles Nerveux D'Ordre Réflexe En Neurologie De Guerre*. Par J. Babinske et J. Froment. Mason et Cie, Paris, 1917.

In these accidents or symptoms are included convulsive attacks, paralysis, various contractures, tremors, choreic movements, sometimes irregular but generally rythmic, troubles of phonation, of respiration, of sensibility (anesthesias, hyperesthesias) and sensorial troubles.

In passing let me say that while *experimental* suggestion is capable of reproducing these phenomena it is doubtful if they can be so reproduced in their complete form in a normal individual, and particularly in their *intensity* and *duration*, excepting in a subject already subject to them. Anesthesia, contractures, and paralysis, for instance can be induced in a normal susceptible person by hypnotic suggestion, but such suggested phenomena spontaneously and very quickly disappear when the person is left without attention. They may be said to be normal phenomena. Given, however, a person already affected with the hysterical *state*, such phenomena with the characteristics of intensity and permanency peculiar to hysteria can be induced by direct or indirect suggestion, and, if they have been recovered from, may be reinduced. They are not normal phenomena. The reason for this difference should be clear with an understanding of the hysterical state.

In the second group he places those phenomena which are uninfluenced by suggestion. In this group are included, on the one hand, dermatographism (which he attributes to an exaggeration of the cutaneous vasomotor reflexes) and, on the other, abnormally intense and prolonged emotional reactions: namely, tachycardia, erythema, hypersecretion of the sweat and intestinal glands.

The phenomena of this group can be artificially and experimentally reproduced only indirectly by the intermediary of emotion which suggestion can excite. For, once thus indirectly excited, these cease to be under the influence of suggestion which "is incapable of determining their form, intensity and duration." They are the physiological manifestations of emotion. He fails, however, to recognize all the manifestations of emotion.

The second group, therefore, must be completely differentiated and each must receive a different and appropriate name. To the first group he would limit the term "hysteria," if used at all. To the second group he would give the names dermatographism, vasomotor troubles, or troubles of vasomotor reflectivity, emotional troubles or troubles of emotivity.

In passing I would say that in one sense these are not troubles at all but only normal manifestations of the emotional hysterical state

of mind. It is the emotion which is pathological in its intensity and permanency, as is evidenced in the phobias, and depends upon the formation of systems or complexes of painful ideas, sentiments and emotions organized by particular experiences of the individual. Emotion, or rather emotional ideas are very commonly a factor in all hysterical states.

Perhaps I may be permitted to recall that many years ago³ I called attention to the fact that these and other symptoms so commonly met with in hysteria and the functional psychoses and neuroses are only manifestations of emotion. So there is nothing particularly novel in segregating symptoms of this class from those of the hysterical state proper.

From his point of view Babinski would abandon the name of hysteria and replace it with the term pithiatism, from *πειθώ*, I persuade, and *ιαρός*, curable, which expresses, in his view, one of the fundamental characters of these "accidents," viz: possibility of curing them through persuasion.

Now let us see what trouble Babinski lays up for himself, and is bound to fall into, from this point of view. Recognizing the failure of the older writers to formulate a definition of hysteria, he feels satisfied with the following which he gives:

Hysteria is a *pathological* state manifesting itself through troubles which it is possible to reproduce by suggestion in certain subjects with a perfect exactness and which are susceptible of disappearing under the influence of persuasion (contra suggestion) alone.

In passing he meets the criticism, that persuasion or contra-suggestion is capable of curing neuropathic troubles that are not hysterical and in particular neurasthenic symptoms, by asserting that there is common agreement that fatigue phenomena, essential characteristics of neurasthenia, are not susceptible of being cured by contra-suggestion alone. The symptoms that can be made to disappear by this method are only hysterical accidents (pithiatic) engrafted upon neurasthenia. That he does not meet this criticism adequately I will later point out, for it is common experience with those who have made a thorough and profound study of hysteria and neurasthenia that fatigue symptoms, even in cases where there are no so-called classical symptoms of hysteria, can be made in certain cases to disappear in the twinkling of an eye by suggestion. In other words, there is a form of

³Fear Neurosis; *Boston Medical and Surgical Journal*, December 22, 1898. *The Unconscious*, 1914, p. 441.

so-called "neurasthenia" which is purely expressive of the "hysterical state." It is one of the "accidents."

To return now to Babinski's definition of hysteria, I would emphasize the fact that he defines it as a "*pathological state*" of which the so-called troubles are only manifestations. This idea of the pathological state—a sound one—should be constantly kept in mind in following Babinski in the development of his argument. For, strange as it may be, after the formulation of this definition, we hear nothing more of the pathological state but only an elaborate and clever exposition of its manifestations. This failure to keep in mind, on the part of Babinski, the conception of the pathological state, is the weak point in the edifice which he builds up. Dwelling only on symptoms he fails to grasp the essential problem of hysteria, losing sight of the pathological state and its psycho-genesis which should be the sought for goal or solution. He confines himself to certain physiological phenomena and loses sight of the fact that many of the so-called troubles which are the manifestations of the "hysterical state" are pure mental stigmata. These are not included in his first group of pithiatic symptoms, i. e. are not recognized as hysterical, though they can be induced in favorable subjects by suggestion. Necessarily, therefore, he fails to recognize that many of the cases which he makes use of to support his thesis were already in the "hysterical state" and manifested classical manifestations of hysteria. These cases that had been exposed to emotional trauma, he assumes were free from hysteria until they were later the victims of suggestion. The consequence of this lack of vision is that when he comes to his data, to the cases which he cites to show that hysteria is not induced by emotion but only by suggestion, he naively describes cases which every clinician ought to recognize had already developed hysteria and already exhibited classical hysterical symptoms of a mental sort induced by emotional trauma, or mental stress and strain before suggestion, even in his own opinion, had got in its work. (I do not say that these mental symptoms are not capable of being induced by suggestion quite as much as the neurological troubles—indeed they are. I raise the point to show the limitation of Babinski's vision and his failure to grasp the hysterical "pathological state.")

Now let us assume simply as a working hypothesis that the "pathological state" of hysteria, however brought about, is a functional dissociation (or disintegration, or inhibition, or repression) of one or more of the normally integrated psycho-neurological systems, mani-

festing itself by loss of certain mental and neurological functions on the one hand, and the activity of certain other functioning systems on the other. This abnormal activity would express itself, because of the disintegration, in uncontrolled response to excitation (from within or without), commonly designated as automatisms. And let us assume that this abnormal activity may be manifested by either the remaining associated systems or by the disintegrated cast off systems. Such a condition, which it is generally agreed, I think, can be reproduced artificially by suggestion in hypnosis, always exhibits increased suggestibility as is the case in hysteria.

As examples of the loss of function in the *mental sphere* from such a dissociated state may be taken: the amnesias, confusional states, bewilderment, "twilight" states, sleep (normal or pathological) unconsciousness, aboulia, deafness, dumbness, blindness, the multiple or dissociated personalities, etc. In the *neurological sphere* we have: the paralyses, the anesthesias, the astasia-abasias, etc.

As examples in the mental sphere of the activity, or automatism, incident to the disintegrated psycho-neurological systems may be cited: the hallucinations, the deliria, the fixed ideas, the emotional mental states, etc. In the neurological sphere: the contractures, tics, spasms, tremors, convulsions, ambulations, etc.

The combinations of these two forms of troubles of the mental sphere give various clinical pictures, such as alterations of character, fugues, somnambulisms and the different well known types, some of which have been made classical by Charcot. Mind you I am not now concerned with the genesis of the pathological state, or its symptoms, but only with the concept of the state and its *relation* to its manifestations.

Now, having formulated this conception of the pathological state let us keep it in view as a working hypothesis while we follow Babinski in his exposition, bearing in mind that he apparently has no conception whatever of this "pathological state" and gives us no idea of what his mystical "state" may be. We are therefore permitted to suspect that he does not conceive of any state aside from the suggested symptoms. Suggested symptoms are for him hysteria.

The corner stone of Babinski's thesis, then, is that the hysterical accidents (pithiatism), very limited according to his conception as we have seen, are always the result of suggestion—auto-suggestion or hetero-suggestion. By hetero-suggestion he very properly includes the unguarded solicitude of those about the patient, contagion from

hysterics, and the medical examinations with their impressive apparatus well adapted to awaken the attention of the patient and to guide his imagination in directions often unforeseen.

As possible factors of auto-suggestion, it is true, he recognizes "the meditations of the subject," and "all his previous experiences and beliefs," but, so far as I am able to extract his meaning from the vague generalizations in which he explains himself, the active factor is a very specific *idea* on the part of the subject of a pathological symptom (e. g. anesthesia or paralysis), one that wills (or suggests) the hysterical "troubles." "The hysteric," he explains after drawing a similarity with a voluntary act, "seizes the idea of a pathological state [symptom?] and makes it a reality when that idea is forced upon him by its systematized affective elements [emotion]: that is to say when it awakens in the patient a desire for certain advantages, or obsessing anxieties (*inquiétudes*), or an abnormal need to astonish, to attract attention, in a word the infinitely varied motives which can induce the facile will to influence these subjects." In short the subject, governed by a variety of motives, simply *wills* the pathological syndrome and thereby becomes an hysteric.

This is delightfully simple, but I fear that mental mechanisms are much more complicated, involve many factors, and are much more difficult to analyze and solve.

That hysterical troubles are induced by psychological factors nobody, I think, nowadays questions. And that at times the exciting factor may be an immediate, direct suggestion—auto or hetero—or an act of will, conscious or subconscious, cannot be doubted in view of the numerous data at our disposal. But it is probably always conditioned by coöperating factors. Yet, even so, that this is always or generally the mechanism is another matter and one, I think, which cannot be accepted by students versed in the pathology of hysteria. The matter is not so simple as that.

I have no cause to quarrel with Babinski for insisting that hysterical *phenomena* can be suggested. Every neurologist has seen often enough examples of this in his practice and indeed is aware that he himself has suggested such phenomena, intentionally or unintentionally. Nor can any one doubt that a large proportion of hysterical stigmata, particularly those following traumatisms, have been so suggested, generally unconsciously, by the examining physician. But that all have been so suggested, or what proportion have been so suggested, is another question. Given a certain abnormal state of mind, symp-

toms can be manufactured almost *ad libitum*. In such a state the symptoms can be educated, just as by re-education they can be made to disappear.

But what is the state of mind? That is the problem. I defy any one to take any man in the street and by suggestion to create hysterical stigmata, or even to take a patient with organic nervous disease, such as tabes, or multiple neuritis, or a cerebral lesion, and create a hemi-anesthesia, or hemiplegia, or dumbness or deafness. You may, to be sure, hypnotize such a person and in the state of hypnosis suggest such stigmata. But now you are dealing with an artificially induced abnormal state of mind. We examine cases of organic disease, of multiple neuritis, and brain tumor and cancer of the liver with impunity, without fear of creating anaesthesia or limitation of the field of vision or paralysis. Why is this? And we place patients in the same ward and in adjoining beds with hysterical cases and they do not contract hysterical symptoms, though other so-called hysterical individuals may. Why is this? If the thesis were that the dissociated state of hypnosis may be identified in principle with hysteria, it would be much sounder.

What is the difference between the normal mental state of the man in the street and that of the person who has undergone some sort of psychological conflict, or trauma, or "shock" (whether from external or from internal forces), that the one is practically immune to hysterical stigmata by suggestion, and the other permits them to be created with ease? This is the crux of the problem.

When it comes to the sources and influences of auto-suggestion, no one will doubt that the "meditations of the subjects" and "all his previous experiences and his beliefs" play an important part as psychological factors in inducing hysterical troubles and particularly the hysterical state, but not in the way that Babinski supposes. According to my interpretation they form "settings," i. e., these experiences, etc., give meaning to ideas, create points of view, "sentiments" and attitudes of mind, and through the impulsive force of their emotions create conflicts between systems, or induce defense reactions that result in disintegration of the integrated psycho-neurological systems and automatisms. The mental conflicts, for instance, may result, through repression, by the force of one of the belligerent factors in dissociation of systems in the psychological or physiological spheres, and this dissociation may rob the personality of various functions organized or integrated within the given dissociated psycho-physio-

logical system. Or a conflict may create subconscious systems that express themselves in automatisms (tics, spasms, etc.). To interpret such a complex mechanism as suggestion is stretching the use of the word and giving it a meaning far beyond that of common usage. Every one will admit that anesthesia or paralysis, for example, is a dissociation of the psycho-sensory system or the psycho-motor system, respectively. Whether it be effected by external suggestion or by internal forces, the fundamental underlying pathological state is dissociation.

But granting that the pathological state as well as the hysterical symptoms may be induced by suggestion alone, and that the complicated process involved may be comprehended under or excited by suggestion, this is not the real fundamental point in Babinski's theory. The fundamental contention is that in all cases suggestion is the causal agency, and that there is no other known agent, including particularly emotion, that can induce the symptoms.

The question is whether the dissociation, as a matter of fact, can *only* occur by the force of a direct suggestion (or act of will), or whether it may be the result of other forces, such as the discharge of an emotion (with an involvement of the system at issue in a wider disintegration); or, by the repressing, or inhibiting force of other psychological factors involving a complicated internal mechanism, etc. The capability of an emotional discharge to induce hysterical trouble is an important one to which Babinski has directed much attention, but only from the point of view of symptoms. It will be necessary to consider the question at length. But first I want to discuss the question whether such dissociations as anesthesia, paralysis, etc., can *only* occur as the result of a direct suggestion or a volition-idea.

We have various data at our disposal which allow an answer, and indeed many of these demonstrate that dissociation, particularly as the result or a form of inhibition, is a factor in the normal mechanism of mental and physiological functions. Without a mechanism permitting of inhibition and dissociation, normal mentation and neurological activity, such as the spinal reflexes, would be impossible. But, leaving that larger aspect of the question aside, I would point out that when a person, in a state of absent-mindedness, or in a "brown-study," or whose attention is deeply engrossed in reading, does not feel a fly crawling on his skin, or hear the ringing of a bell, or a passing street car, he exhibits dissociation of the psycho-sensory field, or, in other words, an anesthesia analogous to that manifested by hysterics.

Again, a subject who is performing automatic writing will be often found to have anesthesia of the writing hand. The dissociation of the motor system has robbed the personality of the associated (integrated) sensory field. In neither of these two examples can there be any question of the sensory dissociation having been produced by suggestion, if the word be used in its proper sense. The dissociation with the resulting anesthesia is brought about indirectly. Again, the functional amnesias are the result of dissociation, as can be easily proved experimentally and therapeutically, and yet they frequently follow immediately traumatism at the moment when the subject regains consciousness. In such cases they cannot be attributed to suggestion any more than when they develop in cases of multiple personality, with which every one ought to be familiar.

Amnesia in its various forms—retrograde, anterograde, etc.,—is one of the classical symptoms of hysteria. Immediately following a so-called "shock" it is a most common occurrence, and even frequently it is observed under circumstances which give the appearance of spontaneity, as in sudden fugues or somnambulisms. In the former case ingenuity is strained to the limit to find an auto or external suggestion; and in the latter, while we must assume a psychological cause, such as a mental conflict, anything like conscious "willing" the amnesia is too far fetched to be worthy of consideration.

I saw a case of so-called "shell shock" which was exhibited to me in a war hospital as a case of insanity. It was easy to demonstrate to the physician in charge that it was in reality a case of anterograde amnesia. Surely this was not suggested by the physician who mistook the real character of the symptoms, and are we to suppose that the affected soldier consciously imagined and willed a symptom of so strange a kind?

Then again, what are we to say of the phenomena observed in multiple or dissociated personality? Every one familiar with these phenomena recognizes that they are merely types of hysteria and knows that different phases of personality may exhibit bizarre stigmata which demand extreme credulity for the belief that they are the product of either auto or external suggestion. One case of my own, for instance manifested in one phase a remarkable form of complete anesthesia which I had never heard of before and which it is difficult to believe the patient had ever conceived of. It was discovered by chance. The patient was found to have lost every bodily sensation, so that, as she described it, she felt that she was "just mind without

a body." She not only did not feel touch, or pain, or muscular sensations, but did not know whether her limbs were passively raised or lowered; whether she herself moved them or not, as she readily did; whether she gesticulated, as she did; whether she smiled or frowned; or whether she stood up or sat down, or what her position in space was. In one phase of another case, the subject was completely anesthetic to touch and pain, unless vision could be employed conjointly with the tactile sense.

In some recorded cases the subject in one phase exhibited one form of paralysis, etc.; in another phase, a different form, in still another no paralysis at all, and similarly with other stigmata. Such cases are known to have exhibited such "troubles" immediately following "shock" without the intervention of a stage of "meditation." The personality seems to fall to pieces by magic, as in transformation scenes on the stage where a blow, or a signal transforms lovely youth into shrivelled old age, or a rock into a splendid chariot.

When alterations of personality are induced by hypnosis even then we may not be able to foretell what stigmata the new phase of personality may manifest, and different stages of hypnosis may exhibit different psychological and physiological defects without our being able to forecast them. Auto-suggestion, it may be said, is the causal agent. But the phenomena are too bizarre for even the wildest imagination to conceive.

I am citing these phenomena and the conditions under which they occur, not to maintain that hysterical troubles cannot be induced by suggestion, but rather to show that they can be induced by other causative agents and mechanisms.

In discussing the pathology of hysteria I might go on indefinitely quoting other hysterical phenomena and the conditions under which they are observed, showing that the former are capable of being induced by other forces than pure suggestion. It must be obvious that whether or not a given hysterical symptom has been induced by suggestion is a matter of fact and not one of principle and must be determined in each and every case.

Babinski's basic principle is that "emotion alone is not capable of inducing hysterical accidents," indeed that "when the human soul is shaken by sincere, profound emotion there is no longer a place for hysteria."

To maintain his thesis Babinski is obliged to show that no other agents can cause hysterical symptoms but suggestion (note that he

does not recognize the pathological state), and for this purpose he must eliminate emotion—the agent to which so much influence has been hitherto ascribed. If emotion can be eliminated, no agent, he assumes, is left but suggestion. “Without doubt,” he admits, “there is reason to believe, *a priori*, that physical concussion, and especially moral shocks, can weaken the personality, enfeeble the critical faculty and decrease sensibility and thus play an indirect rôle in the development of pithiatic troubles; but these agents act only in preparing the ground for suggestion. Are they capable, as has been maintained, of creating by their own forces, suggestion being wholly eliminated, the hysterical phenomena? In other words, a paraplegia, an hysterical monoplegia, for example, can they develop under the influence of an emotion without any antecedent mental representation, automatically, after the fashion of the secretion of the sweat glands, intestinal flux and *erethema*? Such is the problem, essential for whoever would solve the nature and mechanism of hysteria, that it is necessary to submit anew to investigation.”

In passing I would insist that this is a very inadequate conception of the problem. However, I will take it up for examination as laid down by Babinski.

This distinguished neurologist has given a great deal of time and energy to demonstrate that emotion does not induce hysterical troubles. And with this end in view he has examined situations, like the Paris morgue, which have been the scenes of much emotion on the part of distressed relatives, without finding evidence of resulting hysterical troubles. For, he argues, if emotion is capable of causing hysterical accidents, we should find them in such circumstances. It seems a pity he should have expended so much misdirected effort. With a sound conception of hysteria, and of the psychology of emotion, any one could forecast that his investigations would give negative results. No one would hold that a simple discharge of emotion, as a biological reaction to the environment, induces psycho-physiological disintegration and automatism. Emotions—fear, anger, etc.—are biological psycho-physiological instincts or instinctive reactions. In the course of life's experiences they become organized with ideas of objects—the mental experiences of life and the world—into sentiments and systems of sentiments and by their impulses give driving force to our antecedent thoughts, wishes, points of view, mental attitudes, etc. It is these mental systems, thus organized that, when unduly excited, are brought into conflict with opposing systems and by the discharge of

their emotional forces disrupt the normal psycho-physiological integration and equilibrium, repress certain systems, dissociate others, and give rise to subconscious activities that induce many varieties of automatic phenomena. The discharge of emotion, excepting when an element in a preformed system of ideas, probably rarely results in hysterical troubles, but accomplishes only its biological purpose and passes off without untoward effect. What is essential is the organization of the emotional instinct in a system of ideas and it is the whole system that, discharging its emotional impulses, induces disintegration. Failing such an organized system or "complex" we should not expect the disruptive effects.

In the second place, his contention is that hysterical phenomena never appear at the moment of, or immediately after the emotional shock, when the emotion is at its height, but that always "between the emotional shock and the presence of hysterical (pithiatic) accidents there is an intervening phase, sometimes quite long, which Charcot called the 'phase of meditation,' during which auto-suggestion or hetero-suggestion have the opportunity to intervene" and induce the accidents. In support of this view he cites the observations of numerous writers who had the opportunity in this war to observe so-called "shell shock" at the front and behind the lines. Babinski, seems at first to be supported by these observations, for it seems that those symptoms of hysteria which Babinski elects to call alone pithiatic or hysterical, that is the paralyses, anesthetics, etc., rarely developed at the time of the emotional shock but only appeared after an interval, when the soldier had reached some place behind the lines.

A study of the reports, however, shows that the cases, apparently without exception, exhibited at the emotional period immediately following the shock, hysterical mental symptoms of a very marked character. Amongst the symptoms commonly described are amnesias, hallucinations, deliria, inability to respond to questions, even when attempts were made to force a response, apparent incapacity to perform a voluntary act, states of hebetude, stupor, confusional states, states allied to fugues, mental dullness, irrational states, tachycardia, tachypnoea and tremor.

What are these, it may be asked, with the exception of the three last (which are only the physiological manifestations of emotion), but states of dissociation with automatisms, or unregulated and uncontrolled functioning of disintegrated psychological systems? They are from the modern point of view typical and pure symptoms of the hysterical pathological state. Amnesia, for instance, as already point-

ed out, is well recognized as a manifestation of dissociation. In these very cases, then, cited by Babinski in support of his thesis, we have evidence of hysterical manifestations induced by something else than suggestion, and we must remember that this something else is conditioned, at least, by emotion. It may be also pointed out in passing that these mental symptoms, following the discharge, may be brought within Babinski's own definition of hysteria in that they are capable of being produced experimentally by suggestion.

That certain symptoms like paralysis, anesthesia, dumbness, deafness, etc., do not appear until a later period may be a fact, as a matter of observation, but the real question is *why* do these particular symptoms appear only later, while other and mental symptoms appear at the height of the emotional discharge? It is a question of the **WHY**. The fact which seems to have been brought out by observations during this war is that the hysterical state manifesting itself by mental dissociation, can be induced immediately under mental stress and strain at the moment of the emotional discharge, while certain other symptoms, in the great majority of cases, develop only after a period of incubation.

Babinski seems to assume that because this latter class of symptoms develops only after a period of incubation that they must be due to suggestion, particularly hetero-suggestion, although auto-suggestion may be the genetic factor. To this assumption exception may be taken. That many hysterical stigmata, particularly the paralysees, anesthetics, the crises, deafness, dumbness, etc., have their genesis in psychological factors there can be no doubt, and I think that since 1885 there never has been any doubt. That we have all known for a long time. But this is far from saying that they are due to suggestion, whether auto or hetero. The genesis and the mechanism are far too complex for such a simple explanation. They may be called "defense reactions," if you like, according to one theory. But the psychological mechanism of a defense reaction is complicated. This may be due in individual cases to mental conflicts, to subconscious mechanisms of different kinds, etc.

Babinski's fundamental error is not recognizing that the hysterical state is one of functional dissociation and that any psychological factor capable of producing such a dissociation, whether it be emotion or a conflict, is capable of producing hysteria. The mechanism by which individual symptoms is produced is another problem. It may be suggestion, as we all know, or it may be a very complicated mechanism which still requires solution.

THE CLINICAL PSYCHOLOGIST

BY DAVID MITCHELL, PH. D.

THE field of the clinical psychologist is that of individual diagnosis and treatment. The term "clinical" suggests individual, rather than group or mass reactions. In medicine it has referred to the bedside practice of the physician, and is, therefore, individual. Likewise, professional activities among psychologists have set the tendency of making it refer to the condition of one person rather than to that of any number or groups of people.

In this respect, clinical psychology may be differentiated from that of several other types of applied psychology. Educational, vocational, or industrial problems may be individual from the psychological point of view, but each one differs in the sense that it is primarily a treatment of mass results.

Educational psychology takes up the problems of the rate of progress in school subjects, the period at which different elements of the curriculum may best be considered, the methods of instruction and the attitude of the children to class-room work. Progress in the various school branches, such as arithmetic, reading, spelling, writing, is measured by means of educational tests. They are largely psychological in their nature, but are devised and administered for groups rather than for any particular individual. The chief consideration is the average or group score, with the possible variation from that average. The score of one child is seldom of material importance.

Vocational psychology has to do with the determination of aptitudes and qualifications for specified occupations. It does not consider the individual in his relation to those aptitudes. Its point of attack is the question of those traits or qualities which are essential for proper functioning in a certain activity. In other words, it is the occupation or activity which is the point of attack and not the individual who might possibly engage in that occupation.

Industrial or commercial psychology has a number of phases. Advertising is one of the greatest industrial or commercial problems, and it is largely a matter of psychology or the reaction of groups to the method of presentation or method of appeal. The question for the psychologist is: How does this particular presentation, or how does this combination of appeals touch the great mass of people. In

other words, advertising is not concerned with an individual, but is concerned with the reactions of a group. Trade tests, while applied to an individual, are carried on with the chief point of attack being the efficient carrying out of the particular activity. It is a matter of classification into groups rather than understanding why one person does or does not adapt himself to the occupation. The processes in the industrial plant are considered rather than one's reaction toward them, or possibility of his adaptation to the task.

From all of these activities clinical psychology is differentiated by its special problem. In each one of them the individual may be considered and, in so far as he is, we may say that clinical psychology overlaps these other fields of applied psychology. This simply serves to emphasize the fact that the clinical branch is concerned altogether with the mental functioning of one person. The aim is to understand his ability, his emotions, his social reactions, to find out the existence of any special abilities or disabilities, and on the basis of all this information to make recommendations for his adaptation to a present or to a proposed environment.

The clinical psychologist may also be distinguished from the man of research interests. The clinician is a professional person, interested in the application of scientific principles or in the diagnosis and treatment of cases. The experimentalist, on the other hand, is interested in the determination of mental characteristics without regard to what happens to his subject. In the laboratory he makes investigations of the thought processes, the emotions, the learning process, and the various other characteristics, but with no intention of applying his findings to the conditions of his subjects. That is, the clinical psychologist as a professional practitioner may be likened to the physician who considers the symptoms of his patient and prescribes methods of treatment. The research psychologist is likened to the physiologist or anatomist in the medical laboratory who makes his detailed experiments to determine the structure and function of the organism.

Preparation for Professional Practice: Every one considers himself more or less qualified in the field of mental therapeutics. Every physician, every salesman, every artist, every author, and in fact nearly every one who has ever thought about the problems, describes mental symptoms, diagnoses characteristics, and suggests methods of treatment. This claim is made explicitly by a great many of them. It is implied by the statements of many others.

To a certain extent it is undoubtedly a justifiable claim, but only

in the same way that most people can claim to be physicians. All people have certain remedies which they are ready to use or to recommend for a friend whenever he has a cold or a fever, or when there is a general feeling of lassitude and fatigue. Sometimes these recommendations go to the extent of suggesting what is to be done in such diseases as scarlet fever, diphtheria, or pneumonia. While we recognize the skill of many of these "would-be" practitioners, our admiration is somewhat tempered since we know that they lack all specific preparation in medical fields. We now are so little in favor of the practice that we make it a penal offense for anyone to receive remuneration for such advice.

So far we have been much more tolerant of the person who picked up his knowledge of psychology in a haphazard, indefinite way. We are convinced that the practice of medicine is impossible without thorough grounding in the knowledge of medical sciences. Only recently, we have come to the conclusion that mental difficulties are as important from the social point of view as any physical disabilities. With our knowledge of the increased importance of the mental characteristics there has come a recognition of the necessity for thorough training in psychology for anyone who would offer professional advice.

It may occasionally be claimed, as it has been recently, that the situation with medical practice is different from that of psychological practice. We say that an individual who is suffering from diphtheria is not only in danger of death, but is also a source of contagion or infection for all other members of the community. With his physical health and with the welfare of the community from the physical standpoint, it has been argued that we must be much more concerned. As an actual fact, however, I doubt if any case of diphtheria can be a much greater social menace than a person who has had bad mental habits established by his type of experience. The education of each member of a group is more or less affected by the reactions of other members. The various mental characteristics are as directly effective in establishing social or anti-social reactions as is the physical condition of an individual in affecting the physical welfare of other members of the community.

Particularly is this true in the case of children whose emotional life is disturbed by the reactions of adult associates. The existence of fears, of feelings of inferiority, of self-consciousness, of abnormal attitudes toward the sex life, is, to my notion, much more significant in considering the welfare of the individual and the community, than the

physical condition of those suffering from colds, fevers or other physical disabilities. Our legislation today provides penalties for doing physical harm. The death sentence may be carried out for murder and assault may be punished by meting out penalties of greater or less severity. But our legal codes still ignore the effect of those actions which do not result in visible bodily harm. Yet I am convinced that frequently the results of these latter actions are much more calamitous for the individual and for his functioning as a member of the group. Society today is suffering more through undesirable mental habits than through any physical harm done to any group of individuals. The diagnosis and correction of the various emotional complexes which are the groundwork of faulty mental functioning should not be made by anyone not qualified for it by intensive training.

As a minimum of training, I would suggest the equivalent, at least, of the requirements for the degree of Doctor of Philosophy. I shall not try to outline the curriculum in detail, but there are some things of sufficient importance to merit mention. In the preliminary part of the course leading ordinarily to the bachelor's degree, considerable time should be given to a study of the languages in which the literature of the science is written. This would involve thorough understanding of the three modern languages, English, German and French. Obviously the first one should be thoroughly understood, and since so much of the literature of psychology and psycho-pathology is in the latter two the student should be sufficiently familiar with them to be able to understand the written discussions.

In the field of science the student should have a thorough course in biology, with some training in chemistry and probably in physics. The medical laboratory should contribute its quota of training. The anatomy and physiology of the nervous system are rather too much neglected. The psychologist preparing himself for professional practice should not be totally unfamiliar with the physical mechanism.

Either during the latter part of the undergraduate course or in the early part of the advanced work, a student should become familiar with the general problem of education and educational procedure. At the same time a study of sociology, with a knowledge of the development of social institutions, social customs or mores, and of our ideas concerning the reasons for and punishment of delinquency would be most appropriate.

After the training in biology, or possibly co-incident with it, psychology should be undertaken and continued, until a thorough under-

standing of the behavior of the human organism has been obtained. The equivalent of three full years' study would not be too much for this purpose. I cannot take time to outline fully the various courses. They should, however, cover thoroughly the topics of sense perception, memory, association, imagination, illusion, apperception, habit formation and the learning process, the nature of reflex and instinctive activities and the emotional responses.

Not by any means the least important is actual practice in the examination, observation and diagnosis of cases. The mental processes of normal subjects should be analyzed and a student's experience with cases of mental deviation, unusual intelligence, delinquency and other forms of abnormal behavior should be both intensive and extensive. In this training emphasis should be placed upon the necessity of an accurate technique, careful observation and a distinction of the latter from conclusions. That is, there should be a thorough training in methods of obtaining results and in the interpretation of them.

There are two related studies with which the student should be quite familiar. They are psychiatry and psychoanalysis. In psychiatry he should study the various types of mental disease and for this purpose should be given laboratory work in a hospital for the insane with seminar work which would involve three hours a week covering two years. In psychoanalysis, the important literary contributions must be digested. I would suggest at least a seminar period of two to three hours per week throughout one year. In this time the literature could be taken up and an analysis of cases considered. I believe that in the field where psychoanalysis has been so much the vogue the clinical psychologist will find one of his most important problems. We do not need to make any assumption as to one or two fundamental causes of social or mental mal-adaptation. We do need to recognize, however, that great numbers of people who cannot be classed as psychopathic or insane are yet badly adjusted socially and mentally. It is within the province of psychology to make an analysis of these cases, to diagnose causes and to prescribe methods of treatment which will bring about the desirable mental and social adaptation.

It is obvious that the psychological associations can have but little direct influence on the courses offered in many of these subjects. The departments of sociology, biology, languages and education, as well as the laboratories of physiology or neurology will prescribe their own procedure. In psychology, however, the influence of the association should be and I believe can be enormously beneficial. We have

reached a stage in the development of the scientific procedure that a standard of efficiency might well be recommended. I believe that the various departments of psychology should confer and co-operate to such an extent that training in psychology for professional purposes may be maintained at a uniformly high standard.

The Problems of Clinical Psychology. A brief outline of the problems which a clinical psychologist has to face, is now appropriate. By virtue of group tests children or adults may be divided into groups, consisting of individuals with approximately the same degree of intelligence. After this classification, however, it will be found that there are some individuals who do not adapt themselves to the particular group in which they are placed. They must be examined by the clinical psychologist. The cause of their faulty adaptation must be determined by a *psychological analysis* of the difficulties. It may be that the classification was faulty in the beginning, and that with a transfer to another group, and consequently a new set of stimuli, the adaptation will be satisfactory. On the other hand, there may be peculiarities or idiosyncracies, special abilities or disabilities, which make the adaptation of that individual extremely difficult. A diagnosis of causes, with a recommendation for curative measures will then be made by the clinician.

Another field in which clinical psychology should find a wide opportunity is in that of functional disorders. Ordinarily this problem has been supposed to be within the realm of the psychiatrist or neurologist. It is conceivable that organic lesions might sometime be demonstrated, but according to present knowledge, it is largely a matter of nervous or neurone excitability stimulated by an unfortunate or undesirable environment. An understanding of the effect of the stimuli with consequent modifications should bring about a readjustment. The clinical psychologist who qualifies with the training outlined will see in these cases an opportunity for service of enormous value.

There is still another group of cases which has not been considered by the psychiatrist or neurologist, yet whose mental adaptation is very faulty and for whom curative measures should be prescribed. The various emotional factors, such as fear and anger, or the sex instinct, have been responsible for many of these faulty developments. Fears, both reasonable and unreasonable, have been developed and later suppressed without a conscious analysis of the causes and without an understanding of the situation responsible for them. In other

words, there has not been a proper direction given to the emotional energy, and somewhere in the field of unconscious operations the emotional effect is operating to produce faulty mental and social adjustments. Many of these cases are considered by the ordinary observer to be quite normal people. Occasionally they are recognized by the expert on casual observation. Usually no suspicion is aroused but I believe that many are functioning at a lower level of efficiency than their native ability and capacity warrants, and that with proper psychological analysis causes could be determined and measures of cure recommended. The clinical psychologist will have a glorious opportunity for improving mental efficiency as he engages more freely in this proper field of activity.

I would present just one illustration of the type of person who may be described in this way. There came to me several months ago a woman who for the last five years has, to all ordinary appearances, made satisfactory adjustments both from the mental and social point of view. About the beginning of the period she married and apparently the marriage has been successful. The woman seems to carry the responsibility of wife and mother quite well as far as the casual observer reports. Her own story, however, gives one an entirely different impression. Mentally she is distressed to such an extent that proper functioning seems practically impossible. Her activities as a home maker do not satisfy the 'inner urge' or emotional drive. Obviously they cannot be satisfactorily carried on. I am confident that until we have developed in her a courage and enthusiasm for certain artistic efforts that she will never be as efficient as she might, either mentally or socially.

The story of her life is extremely interesting, and can be considered unusual, I am convinced, only because we do not know the stories of the lives of very many of our associates. Left an orphan at the age of six, she was brought to this country by a married sister with whom she lived until she was about fifteen years of age. During that time her life was anything but happy. The memory of it is distressing at the present time. Dressed more shabbily than her playmates and constantly chided and condemned as a useless burden, she finally believed it. The chief result was to develop in her a feeling of inferiority, from which she has never recovered. At the age of fifteen she ran away from her sister's home and went to live with some friends.

After considerable discussion and further trouble she was allowed

to remain with these friends and to enjoy something of life's opportunities. She attended a church in which the music seemed to give her great delight, and was one day heard singing by a master musician and vocal teacher. Through his efforts she was given aid in the development of her talent, and about ten years later had a contract which called for remuneration for her to the extent of \$450 per week. During her training she had overcome the feeling of inferiority to such an extent that she had been able to do this work, but according to her own report she was forever apprehensive of failure. Her efficiency was decreased because she could never get away from the idea that people were judging her as quite inferior.

She finally was encouraged to make another effort for further improvement, and went to Europe to study under a very famous master. Whatever this master's skill in developing other people's talents was, he failed utterly to appreciate the type of mechanism with which he was dealing in this case. Instead of encouragement he gave condemnation, and from the standpoint of the particular person with whom he was dealing his condemnation was given in a most brutal manner. After various efforts to overcome the feeling which he engendered, and to continue with her studies, this "prima donna" whose name would be recognized by many, even if given now, gave up the attempt to further cultivate her talent and returned to this country with no ambition, or at least with not sufficient courage to continue as she had so gloriously begun.

Her marriage, shortly after her return, was considered a haven of refuge, an opportunity to get away from the mental conflicts and from the fears which she suffered. As far as the fundamental talent is concerned, there is little doubt of its enormous social value. But it will be a matter of months, if not of several years, before confidence is sufficiently re-developed that this person will be able to function mentally and socially in the way for which her native ability and her original talent qualified her.

Whatever the claims of psychoanalysis and psychopathologists may be, in my opinion it is with such cases as these that clinical psychologists will find a wonderful opportunity and, by virtue of knowledge of psychological processes, will be able to be of enormous value and benefit to them.

A LECTURE ON THE ABUSE OF THE FEAR INSTINCT IN EARLY EDUCATION

BY BORIS SIDIS

“CHILDREN achieve good by fear of punishment” thus psychologizes a writer of editorials in a far advanced paper of a far western, progressive settlement, “or,” he goes on philosophizing, “good is thrust upon them by their teachers, their parents, and the policeman on the beat. It is the natural instinct of the human animal to lie and to steal. Why do we spank them as soon as they are weaned?” “Why is it” mused Fagin, the educator of *Oliver Twist*, “why is it that children enjoy picking pockets, and old folks are fond of stolen goods?” This birch pedagogy the learned editor regards as good Biology. Then the wise Solomon is cited with his saying: “He that spareth the rod hateth his son.” With his sense of western chivalry the editor thinks that girls are better, but he does not say what he would do with the Solomon’s rod in the case of the fair sex. He concludes, however, his educational wisdom which for some reason or other he prefers to dub as biological, whatever he may mean by it, by saying that: “We are not thoroughly convinced that the elimination of the rod as a correctional instrument has served to make the world better or wiser.” I am not quite sure that this scientific editor expressed the opinion of all his western colleagues, but it shows what a far advanced western editor may offer to his reader as the most advanced biological thought by drawing on the good commonsense of Mother Goose and on the proverbial wisdom of King Solomon for the pedagogic edification of his western audience.

This wisdom of viewing the child as a little brute and training it by fear and force is not confined to editors, but is also maintained by certain types of educators. “Obedience and discipline are the mainstay of the family and the school,” told me a well known educator, a principal of a normal school. “I control my children with kindness, if possible, and if needs be, by force and punishments.” The child is regarded as a sort of a little beast, a kind of young ape, at best a little savage. The child, accordingly, is trained to act not by the light of reason, but by the command of superior force. The child is ruled by fear. Our young generation is trained by fear into discipline and

obedience. We thus suppress the natural genius and originality of the child, we favor and raise mediocrity, and cultivate the philistine, the product of education, ruled by rod, not by thought.

As a protection against fear the child, in self defense, becomes secretive, evasive of truth, and cowardly of action. These traits of character, acquired in early childhood, due to training by rod, fist, intimidation, and fear, become often ingrained in the very soul of the child to last him his life long. Seared by the rod, the scourge, and the fist the child often emerges a moral and intellectual cripple. Cowered and terrorized by the awakening and cultivation of the most powerful of impulses, the impulse of self-preservation and the most uncontrollable of all instincts, the fear instinct, the child can never fully rid himself of all the distressing, morbid consequences. Fear will stay with him and dog his steps all his life long.

As I have pointed out in my works on abnormal mental life, fear is the most fundamental of animal instincts; it is the companion of the most primitive impulse of self-preservation, and together they form the source of what is known as psychopathic maladies, or functional mental diseases, almost infinite in the variety of their manifestations, often extremely virulent in their mental disintegration.

Once this fear instinct and its companion self-preservation are aroused morbid mental life grows like an avalanche in its downward course. In later life this impulse of self-preservation and fear instinct become manifested in various ways, giving rise to the most distressing nervous and mental symptoms. In my medical practice, as specialist of nervous and mental diseases, I have again and again traced the worst forms of functional maladies to the impulse of self-preservation and fear instinct, aroused by education and unfortunate experiences in the early life of the patient.

Training by fear, submission, and obedience inhibits the development of the rational controlling element of the mind, brings forth the lower reflex automatic, subconscious side of mental life, heightens the suggestibility, opening wide the door to all kinds of nervous and mental germs, weakening the mental and moral constitution of man, tormenting him with the great array of obsessions, characteristic of psychopathic diseases in which the suffering of the patient is often greater than that experienced in many diseases of a purely organic nature. Man becomes unreasonable, capricious, driven as he is by the all-powerful impulse of self-preservation and by the furies of the fear instinct. *The centripetal force of self-preservation with its centrifugal*

fear-instinct make the victim revolve in the same recurring orbit of automatism round his own ego as a centre of attraction. Being pitilessly driven by the furies of his fears, he is always hiding and running from life, he is afraid to act openly, fairly and squarely. He always dodges the issue, always in a state of indecision, lacking self-confidence, independence, self determination, and self control. Double dealing, deception, lying, hypocrisy, and an illimitable selfishness form the main traits of his character, the very traits which the wise western editor and educator placed in the souls of the children known to him. The child is by some people, even with a literary turn of mind and having an influence on the community, regarded as a little brute, a little savage, born to deception, to stealing, to crime and vice. No wonder with such views of the child's nature, the little ones are advised to be treated by punishments, by corrections, by the rod, the whip, and the stick, generally by fear and by violence, a training unfit even for dogs. And still when we turn to the really great thinkers of humanity, we find that the child is considered as free from vice, crime, and sin, that perversions, delinquencies, and vices are impressed on the young by family, companions, and society of adults. From Plato and Aristotle to Montaigne, Locke, Rousseau and Tolstoy the same or similar verdict is given as to the nature and character of the young.

"We should not permit" says Plato "the artists of crafts (note: such as our modern movies) to impress signs of an evil nature, of dissoluteness, meanness, and ungracefulness, so that our young generation may not be reared amongst images of vice, as upon unwholesome pastures, culling much every day by little and little from many places, and feeding upon it until they insensibly accumulate a large mass of evil in their souls. We ought to have artists of another stamp who by the power of their genius can trace out the nature of the fair and the graceful, that our young generation dwelling as it were in a healthy region, may drink in good from every quarter, whence any emanation from noble works may strike upon their eye or upon their ear, like a gale wafting health from salubrious lands, and from their early childhood bring them into love and harmony with true beauty of reason. We should give the children an education in which rhythm and harmony may sink most deeply into their soul." "Children," tells us Aristotle, "should not be brought in touch with evil, or with anything that may suggest vice and hatred." From their infancy the young should be surrounded by an environment of grace, harmony, and beauty, by the good, the true, and the beautiful.

Education by force, punishment, repression, rod, whip, and knout will only train a generation of slaves.

Plato insists that "you must train the children to their studies in a playful manner, and without any air of constraint, with the further object of discerning more readily the natural bent of their characters." Montaigne with his deep insight into human passions and clear understanding of human life declares that vigor and liberty become fully extinct when minds become subjected to caprice, authority, and phantasies of others. According to this great critic of all dogmatism, education should be directed by a sweet-severe mildness. Children should be treated not by fear and cruelty, but with kindness and gentleness. Nothing so much degrades and bastardises a young nature as violence and compulsion. He seems to lose his patience and genial nature when he comes to write of the school. "The school is a very prison of captivated youth," a prison where misdeeds are punished before they are committed. Even old Quintillian was not slow in noticing the fact that imperious authority compulsion, and punishments bring many dangerous consequences. Helpless, defenseless as the child is it should not be treated by a stern and frowning countenance and with hands full of rods. "I would do" says Montaigne, "as the philosopher Speusippus did who caused the statues of Gladness and Joy, of Flora and of the Graces to be set up round about his school house," winding up with the following epigrammatic saying: "Where their profit lies there should also be their recreation!" Montaigne's education was of the precocious type in which love was the predominant feature. "The chief thing my father required of those into whose charge he had committed me was a sort of well conditioned mildness and ease of disposition. For amongst other things he has specially been persuaded to make me taste and apprehend the fruits of duty and science by an unforced kind of will, and of my own choice; and without compulsion or rigor to bring me up in all mildness and liberty." Latin being the literary language of that time, Montaigne could talk Latin before he could understand French. He was spoken to in Latin "before unloosening of my tongue, when being yet at nurse." "I entered college at the age of six. . . . My Latin was corrupted. . . . I graduated at the age of thirteen, and had read over the whole course of philosophy."

Locke tells us that "a slavish discipline makes a slavish temper. The child submits, and dissembles obedience, whilst the fear of the rod hangs over him. Beating them (children), and all other sorts of

slavish and corporal punishments, are not the discipline fit to be used in the education of those we would have wise, good, and ingenuous men. . . . Playing and childish actions are to be left perfectly free and unrestrained. . . . The right way to teach them (children) is to give them a liking and inclination to what you suppose to them to be learned, and what will engage their industry and application. . . . Children being restrained by their parents only in vicious things (which in their tender years are only a few) things, a look or a nod only ought to correct; or, if words are sometimes to be used, they ought to be grave, kind and sober, representing the ill or unbecomingness of the faults, rather than a hasty chiding of the child for it. . . ."

If we turn to Tolstoy, the great artist and reader of the human heart, we find this attitude, as to the freedom of children from vice and crime, still more emphasized. "There are two important rules in education" writes Tolstoy. "(1) Live well according to the highest moral ideal. (2) Perfect yourself continually, and conceal nothing from your children, especially your faults, mistakes, and shortcomings. Children are much more sensitive morally than are adults. Without saying or even being directly conscious of it children not only see the faults of their parents, but even the worst of all faults, their hypocrisy. . . . The education of children is self-perfection." Tolstoy is strongly opposed to the way of education as given by the western editor, by trainer and policeman in public school and police court. Such sources are contaminated. Disease, corruption, and degradation alone can result. "Terrible" he says "is the corruption of the mind which the (educating) authorities subject the children during the course of education. . . . Public education, such as we have at present, is directly and artfully organized for the moral corruption of children. Make all sacrifices to keep children away from school." Finally he makes the significant statement, true and beautiful as to its meaning: "If I had to choose,—to people the earth with saints as I am at all able to imagine, but with no children, or with such people (full of imperfection) as we have at present, but with constant coming of new generations of children,—I would choose the latter."

He who is regarded as the greatest of teachers of humanity in admonishing his disciples and apostles held out the child as the ideal of human greatness. "And there arose a dispute among them which of them should be the greatest." When Jesus saw the thought of their heart, he took a little child, and set him by his side, and said unto them: "Whosoever shall receive this little child in my name receiveth

me." (Luke 9, 46). "And they brought him little children that he should touch them: and the disciples rebuked them. But when Jesus saw it, he was moved with indignation, and said unto them, Suffer little children to come unto me; forbid them not; for of such is the Kingdom of God. Verily I say unto you, Whosoever shall not receive the Kingdom of God as a little child, he shall in no wise enter therein. And he took them in his arms, and blessed them, laying his hands upon them." (Mark 10, 13). This deep, sympathetic insight into the child's nature and genius, this profound love of the child, touching as it is in its simplicity and grandeur will ever remain at the very basis of all true human education. Put the little one in front of you, take him tenderly in your arms, give him your heart's blessings, surround him with the halo of love, all this will ever go to form the eternal image of the greatest of teachers of humanity.

One important point claims our attention in the early education of children. We should immunize our children against mental microbes, against superstitions and prejudices, against all forms of harmful beliefs, as we vaccinate our babies against small-pox. The cultivation of critical judgment and the knowledge of good and evil form the powerful constituents for the neutralization of virulent toxins, produced by mental microbes.

We should not at the same time neglect proper conditions of mental hygiene or mental sanitation. We should not people the child's mind with ghastly and ghostly stories, with uncritical beliefs in the supernatural, and with article of creed which under the cloak of love are charged with arrogance, intolerance, and hatred. We must guard the child against all evil fears, force, violence, superstitions, prejudices, and credulity. Plato in his immortal dialogues refers to this point in early education: "What then is the education to be? Perhaps we could hardly find a better one than that which the experience of the past has already discovered, which consists, I believe, in gymnastic for the body, and art for the mind. And shall we not begin with the art, the education of the mind, rather than with the education of the body?—Undoubtedly we shall.—Under art or music we shall include narratives, or not?—Yes, we shall.—And of narratives there are two kinds, the true and the false?—Yes. And must we instruct our pupils in both, but in the false narrative first?—I do not understand what you mean," Adeimantus, his interlocutor replies.—"Do you not understand that we begin with children by telling them fables? And these, I suppose, to speak generally, are false, though they may con-

tain some truths; and we employ such fables in the treatment and education of children at an earlier period than gymnastic exercises.—True.—That is what I meant when I said that art or music ought to be taken up before gymnastic.—You are right,—Then you are aware that in every work the beginning is the most important part, especially in dealing with anything young and tender? For that is the time when any impression which one may desire to communicate is most readily stamped and taken.—Precisely so.—Shall we then permit our children without scruple to hear any fables composed by any authors indiscriminately, and so to receive into their minds opinions generally the reverse of those which, when they are grown up to manhood, we shall think they ought to entertain?”

Aristotle follows his great teacher Plato by laying down the fundamental rule of education: “We should be careful what tales or stories the children hear. For the sports of children are designed to prepare the way for the business of later life.” “From an earliest age all that is mean and low should be banished from their sight and hearing. . . . No image or picture representing unseemly action should offend the eyes of the young.”

We should counteract the baneful influences of the pathogenic, pestiferous mental microbes which now infest our social air, since the child, not having yet formed the antitoxin of critical judgment and knowledge of good and evil, has not the power of resisting mental infection, and is thus highly susceptible to mental contagion, on account of his extreme suggestibility. The cultivation of credulity, the absence of critical judgment and the lack of recognition of good and evil, with consequent increase of suggestibility make man an easy prey to all kinds of social delusions, mental epidemics, religious crazes, financial manias, patriotic wars, enthusiastic parades, resulting in slaughter and plagues which have been the baleful pests of aggregate humanity in all ages, and more specially in our times when the wave of social suggestibility of the worst type spreads like wild fire throughout the world. As long as the child will be trained not by love, but by fear, so long will humanity live not by justice, but by force. As long as the child will be ruled by the educator's threat and by the father's rod, so long will mankind be dominated by the policeman's club, by fear of jail, and by panic of invasion by armies and navies.

There are in the United States about half a million insane, while the victims of psychopathic, mental maladies may be counted by millions. Now that the war is over, there will come thousands upon thou-

sands of nervous and mental wrecks, under the name of shell shock or war shock, the unfortunate results of nervous exhaustion and fear shock produced by the war. Even before the war fully half the number of patients treated by the general practitioner were psychopathic in character. After this terrible war the increase of psychopathic cases will be enormous. Insanity can be alleviated,—but much, if not all, of that psychopathic misery known as functional, mental diseases is entirely preventable. For it is the result of our pitiful, wretched, brain-starving, mind-crippling, terrifying and terrorizing system of education.

In my medical work in nervous and mental diseases I have become impressed with the fact that the impulse of self-preservation, accompanied by its satellite, the fear instinct, plays a prominent rôle in the causation of psychopathic diseases. At the very outbreak of the war I predicted the occurrence of many cases of psychopathic diseases, known under the term of shell-shock or war-shock, which are sure to develop under the strenuous conditions and dangerous as well as poisonous environment full of favorable stimuli for the awakening of the impulse of self-preservation and its associated fear instinct. To quote from my work on *"The Causation and Treatment of Psychopathic Diseases"*: "In the present fearful war of European nations (this was written before United States entered the war) the pressure of invasion by the Teutons and their allies, a war unparalleled in the history of humanity for its extensive brutal destructiveness, a war in which all the inventions of ages are made subservient to the passions of greed, hatred, and ferocity, having one purpose the extermination of man, a war surpassing all battles waged by man, in such a calamitous slaughter of nations, the fear instinct comes to the foreground, claiming its victims, working havoc, among the frenzied, struggling armed masses and and terrified, stricken populations."

In my clinical study of numbers of cases under my medical care I have become convinced of the preponderant influence of the impulse of self preservation and fear instinct in early childhood in the causation of psychopathic nervous and mental maladies. Most, in fact we may say all, of functional, nervous, mental diseases have their origin in early childhood.

An early, suggestible mental life brought about by intimidation, by a persistent system of inhibitions, by overstimulation of the impulse of self-preservation and its associated fear instinct in early childhood are among the important factors of psychopathic diseases in later

life. In my work "*The Psychology of Suggestion*" I proved by a series of experiments that the conditions of suggestibility are: Fixation of the Attention, Monotony, Limitation of Voluntary Movements, Limitation of the Field of Consciousness, Inhibition. I have shown that these conditions are favorable to a disaggregation of consciousness. I have also pointed out that a disaggregation of consciousness with an inhibition of the controlling, waking consciousness is one of the important conditions in the causation of subconscious states with their abnormal suggestibility. In other words, the inhibition of the personal self, or even the limitation of the personal self, helps the formation of dissociations which constitute the soil of all psychopathic diseases. When the person, on account of a narrow training and a limiting system of education, based on force and fear in early childhood, becomes narrowed down in his range of knowledge and comprehension, when his superstitions and prejudices in mysterious agencies, such as transmission of telepathic "disease and death thoughts" and fears of various sorts of a spiritualistic, or Christian Science beliefs, and other religious faiths of the mystical types are impressed on uncritical and undeveloped minds, the predisposition to mental disaggregation and consequent psychopathic diseases becomes strongly pronounced. With the limitation and inhibition of the critical personal self, with the limitation and narrowness of personal life interests, there goes an increase of the sense of the unknown and the mysterious, often cultivated by religions based on impressive mysteries and superstitions with the baneful consequences of the development of the impulse of self-preservation and the fear instinct,—the cause of psychopathic diseases.

An uncultivated personality with a limited mental horizon, with a narrow range of interests, a personality sensitive to fear inhibitions, is a fit subject to all forms of obsessions. The fear instinct, fostered by mysteries, frights, scares, dread of sickness, dread of the moral mind and its shadows and fear of thought-transmission of deadly mortal ghosts of ideas, entertained by superstitious sects known by the pompous name of Christian Scientists, is a fundamental factor in the causation of abnormal mental states termed psychopathic. Fear impressed by moral and religious injunctions and duties by means of physical punishment, or by constant scares of punishment to come in this world or in another world, the enforcement of social taboos with the consequent dread of failure, degradation, and loss of character,—all go towards the cultivation of the impulse of self-preservation and fear instinct which in later life form the soil of functional psychosis with all

its baneful effects and morbid symptoms. Thus a psychopathic patient writes in his account: "I dwell on my childish acts, because of my religious training, because of the superstitions charged with religious and pseudo-moral emotions."

Perhaps a few concrete cases will bring out more vividly the fact of the pernicious effect of early education by means of force and fear. I have studied for years the many patients who have come under my medical care and treatment. A close examination into the history of development of the trouble invariably brings one to the same sources of mental disease: Inhibition of the critical self in early childhood by means of force and fear, the overgrowth of the uncritical suggestible subconscious self with an abnormal hypertrophy of the impulse of self-preservation with its allied fear instinct.

As illustrations I give a few extracts from the many cases studied and treated by me:

A patient of mine, a professor in mathematical physics, a man of the highest achievements in this branch of science, writes: "I have always had a great fear of the supernatural when left alone. I am never afraid of robbers when alone at home, or animals when alone in the woods, but I am mortally afraid of the sudden appearance of some mysterious unknown, or of some departed, as, for instance, the ghost of one of my parents. This was always so and is so today, perhaps because I was very much alive to the situation at the time of my mother's death (my age eight) and of my father's death (my age eleven)."

A patient of mine, a physician, suffering from acute religious melancholic depression writes in his notes to me: "It is difficult to place the beginning of my abnormal fear. It certainly originated from doctrines of hell which I heard in my childhood, particularly from a rather ignorant woman who taught Sunday school. My early religious thought was chiefly concerned with the direful eternity of torture that might be awaiting me, if I was not good enough to be saved."

Another patient of mine, a bishop's wife, suffered from insomnia, from nightmares, from panophobia, or general fear, dread of the unknown, from claustrophobia, fear of remaining alone, fear of darkness, and numerous other fears and insistent ideas. All these morbid conditions were traced by me to impressions of early childhood. When at the age of five, the patient was suddenly confronted by an insane woman suffering from attacks of maniacal excitement. The child was

greatly frightened. Since that time she became obsessed with the fear of insanity. When the patient gave birth to her first child, she was afraid that she and the child would become insane. Many a time she had the feeling that they *were* already insane. Thus the fear of insanity is traced to an experience of early childhood, an experience which, having become subconscious, has been manifesting itself persistently in the subconscious.

The patient's parents were deeply religious of the good old puritanic type. The child was brought up not only in the fear of God, but also in the fear of the devil. Being sensitive and imaginative, the devils of the Gospel were to her stern realities, all the more so as the family believed in them as Gospel truth, and she was often threatened into good behaviour by interposition of the action of some diabolical agencies which punish little girls for not being good. The patient was brought up on brimstone and pitch from the bottomless pit for sinners and unbelievers. Every Sunday she was taken to church to hear a preacher who used to give her the horrors by his vivid descriptions of the tortures of sinners in the depths of hell. She was in fear and anguish over the unsolved question: "Do little sinners—girls go to hell?" Various states of fear dogged her steps all her life long. Unless specially treated fears acquired in childhood last throughout life.

I call your attention to a short account of a patient of mine, a prominent member of the Christian Science church. Among other troubles the patient was obsessed with a fear that her husband, also a Christian Scientist who also came under my medical care, had committed some heinous crime the character of which she could not fathom. Christian Science could not cure them of that mortal sin, and they came to me for relief. "Even if my husband" she told me "should confess to me the most awful of crimes, I would still suspect him of worse ones." A letter from the patient may best show her state of mind. "There is nothing new to tell you. It is the same old, pitiful story, only varied a little from day to day. I have no rest, not a moment's peace of mind. I lie awake for hours at night, sometimes the whole night; my days are full of anguish and unrest. . . . I am truly a crushed and heartbroken woman, and would almost be willing to give up the struggle, were it not for my dear little children who are dependent on me." Now an examination of the case disclosed the fact of training by fear in the early childhood of the patient's life. The patient had in early life a severe religious training,—an

intense faith in mysterious agencies was cultivated in her by the family which had been faithful adherents of Christian Science for years. She herself became one of the active members of the church. The patient was specially imbued with the noxious superstitious belief, current among Christian Scientists,—the belief in telepathic influences. She had implicit faith in the transmission of evil influences by thought-transference, a sort of mental wireless telegraphy which now forms the delusion not only of Christian Scientists, but also of many unbalanced psychopaths, insane and demented in asylums. She is firmly convinced in the presence of telepathic powers of “death-thoughts” sent by some wicked members of the Christian Science Church. She in fact even knows the lady, a Christian Science reader, a lady of unusual telepathic powers, who has been sending to her those evil telepathic influences. Fortunately that malicious lady, the reader of “Science and Health with a Key to Scripture,” died, and my patient felt much relieved.

I wish to call your attention to another case investigated and treated by me with the co-operation of Dr. Morton Prince. The patient, a Russian, suffered from epileptiform attacks on the right side of the body. The whole right side was involved in the attack of spasms; the side was anaesthetic and analgesic,—the patient did not respond to touch and pain sensations on that side. The patient left Russia on account of religious persecution. Since childhood he lived in an atmosphere of fear and violence. A close examination revealed the history of the case which can be given here but in a few words. The full account of it was published in a medical journal. When about the age of sixteen the patient attended a ball in his native town. After midnight he was sent out to look for a ring lost by him on the way to the ball. The young fellow was superstitious in the extreme. His early education was quite neglected,—he could neither write nor read,—he had a firm belief in sprites, spirits, and ghosts. On his way he had to pass a cemetery. He became frightened—it seemed to him that somebody was after him. He fell down, and became unconscious from intense fear. In this unconscious state he was picked up and brought home. His present epileptiform attacks date from that incident. He suffered from major attacks reproducing the accident at the same date and at the same hour when the incident occurred. The attacks, in short, reproduce the original accident as well as the condition of fear, convulsions, struggles, unconsciousness with resulting

anaesthesia on the same side on which he fell in his panic of ghosts coming to attack him from their graves in the cemetery.

Here is another case: A patient of mine, a young lady suffered from all sorts of nervous troubles and mental depression. The history of the case may be given in the following outline: As a child the patient was sensitive and nervous. She was brought up in fear, and was extremely impressionable. She liked to listen with trepidation to stories of spirits, goblins, and ghosts, and was in mortal fear of evil agencies and disabological influences. She did not fare any better in her sleep, since she suffered from frightful dreams and nightmares, developed in her by the general state of apprehension. The patient passed her childhood in continuous fear of unknown and mysterious influences, surrounding her on all sides. Later on the fears apparently lapsed, but they really did not disappear—they became subconscious. It was these subconscious fears of early childhood that were manifested in the stress and worries of fully developed womanhood as states of anxiety of some mysterious impending evil,—the basis of her nervous condition.

I cite here a few extracts from the rich variety of autobiographical notes, submitted to me by my patients in the course of my investigation and treatment. "The earliest recollection of my fear that I have" writes a patient suffering from a severe mental trouble "goes back to my early childhood. I heard that wicked people would be judged after death and irrevocably sentenced to eternal torture in fire, and the idea raised a feeling of the most intense horror in my mind, lest I should not come up to the necessary standard in that dread day of judgment. I used to resolve to be good, particularly on reflection after going to bed, that I would be better so as to escape. However, the fear was rather vague.

When I got to be about eleven or twelve years old the fear got to be concrete and more constant. Then I feared that some remark I had previously made about God might have been blasphemy against the Holy Ghost which the Bible says is not pardonable in this and the next world. . . . By the time I was sixteen I had become very much demoralized, afraid of facing my fear. I went all to pieces with fear. . . ."

Another patient of mine, an engineer of ability, gives the following account: "You will remember I told you that my step-father was a liquor-dealer. Throughout the time he was in business we either lived over the bar-room or else lived in the place where the liquor was sold. My

step-father was a heavy drinker, a man of violent nature, and decidedly pugnacious. As a child I have been beaten, terrorized by my step-father, and scared to death by drunken brawls. Many a night have I been dragged out of bed by my mother who would flee with me to a neighboring house for safety. Until I was seventeen years old I lived in continuous terror of something going to happen. If my step-father was arrested by the police, our home would be the scene of turmoil. One night he came home all covered with blood as the result of a fight with thugs. Another time he left home with a pistol for some quarreling drunks, and returned shot through the hand. My step-father has been subject to nightmares nearly all his life. He would cry and moan, unable to move, until someone would shake him out of it. He was terribly afraid of them. I remember he would say that he would die in one of the attacks. I used to be left alone with him quite frequently, and I stood in constant fear of his dying. If he fell asleep (as he frequently did in the day-time) I would either wake him or watch his respirations, to see if he was alive. At other times I have been awakened in the night by his cries, and would assist my mother in bringing him to consciousness. It was during one of these attacks that I became aware of my heart palpitating, and whenever he had such a spell, I would be in a state of fear and excitement for some time after. He would have these nightmares nearly every night, and sometimes four or five times in one night. I began to have attacks of dizziness in the streets, and finally, one day, all the symptoms and fears of the attack came on in school. From that time on I have watched my respiration, suffered from dizziness, from depression, and sadness."

In the autobiographic notes of another patient, a physician of high standing in his profession, the account of the history begins with the following significant statement: "I was bred in fear from my childhood. My training and education were essentially religious, of an authoritative and terrorizing character." Other patients preface similarly their autobiographic accounts of the history of their troubles with words no less unmistakeable as to the significance which the oppressive fear system of education played in the misery, suffering, and ruin of their life. Thus one patient opens her autobiographic account with a statement which in my experience is fairly characteristic of thousands of other cases, in fact, it may be regarded as typical of all psychopathic afflictions: "I am a married woman of fifty-two. All my life I have been imprisoned in the dungeon-keep of fear. Fear paralyzes me in every effort . . . In childhood every-

thing covered me . . . I was in agony of fear." . . . She concludes with the following: "In my childhood hell fire was preached . . . I was bred in fear, and self-destruction resulted."

The great Italian physiologist, Mosso, agrees with the dicta of the greatest thinkers on the subject of child education, from Plato and Aristotle to our own times. "Every ugly thing," says Mosso, "told to the child, every shock, every fright given him, will remain like minute splinters in the flesh, to torture him all his life long."

If we wish to have a strong, healthy, happy race of men, we should lay a good foundation in the education of early childhood. We should avoid all means of brutal, slavish training which cripple man's individuality, freedom, and happiness. We should not use violence and fear. We should be careful to remove from the children all that is brutal, ugly, vicious, and fearsome. We should surround our young with the graceful, the true, the beautiful, the good, the kind, the lovely, and the loving.

Permit me again to trespass upon your patience by citing the remarks on education made by the great Stagirite, the master of human thought:

"Education of man should develop the best in man. Happiness is assumed to be the aim men strive after. Happiness, however, is virtuous activity. The active life is the best, both for society and the individual. That society is best in which every man is best, whoever he is, and can act for the best, and live happily (*Observe that the modern ideal of training for efficiency of production in quality and quantity is not favored by the great thinker*). Happiness is activity, and the actions of the wise and the just (*not activity for production of marketable goods*) are the realization of what is noble. Not that a life of action must necessarily have a relation to other men, as some persons think, nor are those ideas only to be regarded as practical which are pursued for the sake of practical results, but much more the thoughts and contemplation which are free, independent, and complete in themselves. To man the life according to intellect is the most pleasant,—intellect constituting the special nature of man. Such a life is the most happy. The wise man, the man who rules himself, is the happiest man:

"Happiness is self-rule. Man should be educated not for business, but for leisure. It is peculiarly disgraceful to have such a poor-education as to manifest excellent qualities in work, but in the enjoyment of leisure to be no better than a slave. It is not the nature of

free men to be always seeking after the useful. Education and study should be with a view of the enjoyment of leisure. A state is not a community of living beings only (*not for the sake of business, occupation, and exchange of products*), but it is a community of equals, aiming at the best life possible. In a good harmonious education Nature, Habit, and Reason must be in harmony. Now in men Reason and Mind are the end to which nature strives, so that the education of the citizen should be with a view to that end, namely the cultivation of Reason and Mind."

THE STAMMERING PROBLEM SOLVED

BY ERNEST TOMPKINS, M. E.

THAT THE article by the Blantons entitled "What is the Problem of Stuttering" in the February, 1919, Journal of Abnormal Psychology leaves something to be desired, may be seen from the summary, which reads, ". . . there is or may be postulated some hereditary or acquired weakness in the field of emotional adaptation plus some hereditary or acquired weakness of the adaptive functions of speech, presumably in the kinesthetic, auditory or visual centers." Instead of definiteness we have in this sentence, "may be," two "somes," "presumably," and then indecision as between the "kinesthetic, auditory or visual centers." Since the authors themselves, in the same article, make a strong and worthy plea for settlement of the stammering problem, they will surely welcome a settlement.

Some one will say, "How can there be a settlement when the field is so confused?" And the question would seem reasonable in face of the glaring contradictions which are constantly appearing in the articles on the subject. The answer will be that if there can be a settlement it must be by scientific procedure, and that necessitates the establishment of a tenable theory. After we have the theory established the rest is easy. Let us take an illustration from the field of astronomy in order to convince those who, from unsatisfactory experience with fallacious theories, are accustomed to doubt all theories. When Kepler summed up all the reliable observations of the paths of planets and satellites in the conception that their paths are ellipses, he formulated a theory so comprehensive that it is accepted as the truth: we no longer call it a theory. And when some observer announces something different, we are not disturbed in our belief, for we know that Kepler's conception crystallizes the myriads of reliable observations. The new observer may be perfectly honest, but there is something wrong with his observation.

Now is there a theory in the field of stammering as reliable as Kepler's theory in the field of astronomy. Yes, there is; but it is not generally recognized because it is opposed by the same prejudice which opposed the views of Kepler, Galilei and all the other intellectual pioneers. This theory has been detailed so many times during the last

five years that it would be burdensome to give even the numerous references. The article in the Pedagogical Seminary for June, 1916, gives a comprehensive idea of it. Since the many expositions of it in the medical and scientific press stand undisputed, and since it accounts for all the manifold and perplexing manifestations of the disorder, it must be accepted as a working theory, provided we are to be scientific, and that is the understanding. Let us satisfy any who would question our right to proceed. Suppose he says, "I hold to the thymus theory, or to the auditory-amnesia theory, or to the visual-asthenia theory." But none of those theories accounts for the acquisition of stammering by imitation or association, and the speech-interference theory does account for such acquisition and for all other manifestations of the disorder, so we must accept the speech-interference theory. And the same statement holds true for any other theory that has ever been propounded. So there is no choice but to proceed on the basis of the speech-interference theory.

What is the speech interference theory? It is that the stammerer impedes his speech by a misdirected, conscious effort impelled by his fright. Let the reader grasp this fact—for fact it is, and anyone can see it—that the stammerer makes his own difficulty. Of course he has the fright, or emotion, but that is the result of the humiliation caused by his impediment. How did it begin? Why, by a temporary speech-interruption, the long sought common causal factor that has upset every other theory in the field. Dr. Makuen died without knowing that common causal factor. In the origin by imitation the interruption is intentional, by association it is unintentionally imitative, by fright it is the paralysis of terror, by sickness it is weakness. Once the temporary interruption induces the misdirected conscious effort, then the unkindness of society makes the humiliation which builds up the incomprehensibly tenacious fear.

Now we have our theory, let us use it. Is stammering coincident with the beginning of speech? No. How can one interfere with his speech if he has none with which to interfere? He can not. Speech must be acquired—speech always is acquired—before stammering can begin, notwithstanding that determined contestant who altered some of his previously published histories in order to prove the contrary! (*Quarterly Journal of Speech Education*, October, 1918, p. 454).

Can stammering be inherited? No. If it was inherited, it would be dissipated during the fluent period of speech acquisition. For, just as impeded speech builds up the fear which continues the disorder,

so fluent speech builds up the confidence which dissipates the disorder. Of course there are the numerous "proofs" of inheritance, such as Rudolf Denhardt's, traced back so many generations that approximately 100% inheritance of stammering, or measles, could be proved; such as Makuen's, which on the face of it, by summation of the percentages of causes he gives, turns out a mathematical disproof; such as the innumerable surmises of inheritance from a few occurrences of the disorder in different generations of the same family; but what a pity it is, what a travesty it is, to present such reasoning as medical science. Excepting the political vagaries which are unsettling the world there can probably be no greater wrong to the race than to keep the healing art down to the level of mere speculation and even worse. There is no more persistent error in connection with stammering than this interminably repeated inheritance, which not only lacks foundation in observation—just as much as inheritance of measles does—but which is actually barred from existence by the very nature of the disorder.

Has the stammerer any typical characteristics other than his stammering? No. Provided he had speech to begin with, and provided the temporary interruption occurred, he would stammer, and by stammering he would increase his difficulty until he had small chance of recovery. He might be immoral, he might be neurotic, he might be a coward, he might have an enlarged thymus, he probably would have sex; but his having any or all of those things would not make him a stammerer, nor would his being a stammerer bring on him any of those things. Let those who would dispute, do so. Say, if you please that his stammering would make him a neurotic. Let us consider that statement on its merits. Society humiliates him because it finds his antics funny. The humiliation pains him, and he dreads the repetition of it. But is a dog a neurotic because bad boys tie tin cans to its tail whenever they catch it? If the boys desist from plaguing the dog it will behave normally; and if society would desist from humiliating the stammerer he would not only behave normally, but would begin to recover. Most of the girls do recover on account of the greater consideration shown them. Go to any of the stammering schools and see the light-heartedness of those pupils whose quickly acquired fluency has convinced them that they are free from their affliction. Do they act neurotic? Not by any means. They almost walk on air. The long and short of it is that the charges against the stammerer of innumerable deficiencies are as baseless as they are cruel. He has a complicated, self-intensifying habit of extreme tenacity after

it has run for a time. And he is kept in the habit by the cruelty of society and by commercialism and faulty observation, both of which latter combine to hide the habit nature of the disorder and to represent it as a disease.

What is the solution? Extirpate the disorder by forbidding childhood indulgence in the convulsive efforts. Is that anything new? No; it is comparatively common knowledge. Otherwise there would be twice as much stammering as there is. This monumental confusion of the subject—a feature harped on as loudly as on the need of really doing something to abate it—exists only in our learned discussions of the subject. Turn to Chamber's encyclopedia of fifty years ago and you may therein read a better discussion of stammering than can be found in any modern reference book or encyclopedia. The hands of the clock have been turned back, and the modern literature on the subject is more erroneous than it was two generations ago. You find in that discussion that stammering is classified as a habit and the word habit is underscored. Do you find that to-day? *Pas sur votre vie*. One more-or-less prominent authority who was disseminating a discussion of stammering which he himself pronounced the finest discussion in the English language, on having called to his attention the fact that he had frequently and inadvertently mentioned the disorder as a habit, withdrew this superior discussion and substituted for it another which held much more rigidly to the disease classification. But the biogenetic law, and Mendelism, and evolution met with the same reception; so we may conclude that not yet, nor even soon, but possibly within a couple of generations the stammerers will get the justice which has been denied them since the race became human.

NOTES

THE IOWA CHILD WELFARE RESEARCH STATION

THE STATE UNIVERSITY OF IOWA

IOWA CITY

The Iowa Child Welfare Research Station was established two years ago by the State Legislature as an integral part of the Graduate College of the State University for detailed and consecutive scientific investigations of problems in the field of the development of the normal child. The purpose and methods of the Station are those of *scientific research* with the laboratories, libraries and instructional courses of the University as part of its organization and equipment.

At present the Station is prepared to give training for the doctorate in Child Psychology and in the Nutrition of the Child with unusual opportunities for scholarly men and women with their degree who wish to continue advanced research under favorable and standardized conditions.

A group of research students are now at work and appointments are offered with stipends ranging from \$480.00 to \$1,500, as research assistants to exceptional men and women with scientific insight, abandon and preliminary training for research work. The research assistant devotes four hours per day to some phase of research in progress in the Station and in addition may carry a schedule of courses or devote himself to his own problem. No teaching is required.

NATIONAL PHYSICAL EDUCATION SERVICE OF THE PLAYGROUND AND RECREATION ASSOCIATION OF AMERICA

To help establish in every school in America physical education for the health and bodily efficiency of the children is the purpose of the National Physical Education Service with its Headquarters in the Homer Building, Washington, D. C. Shocked by the revelation of the national tendency toward physical degeneration shown in the draft examinations and the surveys of school children, a National Committee appointed by the United States Bureau of Education has secured the establishment of this Service by the Playground and Recreation Association of America.

That the children in the country as well as the children in the cities need this fundamental sort of education is clearly indicated by the surveys showing physical deficiency as prevalent among the children of rural districts as it is also among the children of the crowded cities. The most effective mental and moral training will not go far toward the making of all-round American citizens unless

adequate provision is made for the health and bodily efficiency of the boys and girls.

The thirteen states which have more or less effective laws requiring physical education in all the schools are as follows:—California, Delaware, Illinois, Maine, Maryland, Michigan, Nevada, New Jersey, New York, Oregon, Rhode Island, Utah, Washington. Bills H. R. 7 and S. 1017, now pending before Congress, plan to distribute to the states for the promotion of physical education twenty million dollars; this money to be distributed on a fifty-fifty basis, each state being required to appropriate an amount equal to the Federal funds received.

It is expected that all the State Legislatures meeting in 1920 will consider this important matter and it is recognized that the public press will be an important factor in making clear to the people the urgency of prompt and effective action to conserve and develop the physical fitness of the school children.

The National Physical Education Service stands ready to assist by furnishing information regarding the programs operating under existing laws in the various states and by making available every possible sort of helpful information.

NATIONAL RESEARCH COUNCIL

A special committee of the National Research Council, consisting of Dr. R. M. Yerkes, chairman, and Dr. M. E. Haggerty of the University of Minnesota, Dr. L. M. Terman of Stanford University, Dr. E. L. Thorndike of Teachers College, Columbia University, and Dr. G. M. Whipple of the University of Michigan, with financial support from the General Education Board, have formulated a plan for using the army mental tests in schools. Such intelligence tests have been used in schools for some time on individual children, but the new plan provides for handling them in groups, even whole class-rooms at a time. The committee selected about twenty tests for careful trial. This trial was made on five thousand children. As a result the committee has now been able to select from the tests two series which seem to be the most satisfactory and these will now be tried on several thousand more children in order that they may be further perfected before they are finally offered to the teachers of the country for general use.

This carefully worked out program for group tests will make it possible and practicable to make wholesale surveys of schools annually, or even semi-annually, so that grade classification and individual educational treatment can be adjusted with desirable frequency. It is expected that the methods will be ready to be published for general use early in 1920. The army tests on which these new group tests for children are based and which were used with striking success and advantage during the war, were originally devised by a group of psychologists working under the auspices of the National Research Council.

REVIEWS

EXPERIMENTS IN PSYCHICAL SCIENCE. W. J. Crawford, D. Sc. Lecturer in Mechanical Engineering, Municipal Technical Institute, Belfast, and Queen's University, Belfast. E. P. Dutton & Co., New York, 1919. Pp. 201.

In experimental science one does not undertake to accept or deny the results which an investigator has arrived at unless either he has repeated the experiments reported and finds that his own observations confirm or contradict them, or on examination of the report discovers errors of method or fallacies in the conclusions arrived at from the reported data. In the latter alternative he says "not proven," in default of the former simply that he doesn't know.

In the instance of the experiments undertaken by the author of the book under review, the alleged psychical, or rather really physical phenomena are of such a peculiar nature, so contradictory of the accepted physical laws of nature and so dependent for their investigation upon obtaining suitable subjects who manifest them that it is not open to every one to attempt to repeat them. Indeed not only the phenomena themselves, but the conditions under which they were observed and the experiments conducted were in the most important respects peculiar to the subject or so called medium. It would be very difficult, if not impossible, to find other subjects manifesting identical phenomena, under identical conditions, and permitting similar methods of experimentation. It is therefore incumbent on Mr. Crawford, if he wishes his investigations to be recognized and the results of his experiments to be considered seriously, to submit his medium to the independent investigation of other capable observers trained in scientific methods. If for any reason, no matter what, this is impossible, then it is impossible to accept or confirm Mr. Crawford's work.

It will be said that many mediums exhibit similar "material" or physical phenomena, such as levitation of tables. They do, but not under similar conditions, and even if so, if it should turn out that other results and other conclusions were arrived at, then it could be still maintained that these conclusions were not applicable to the phenomena manifested by Mr. Crawford's medium and we should be no "for'a'der."

In lieu, then, of any opportunity to repeat Mr. Crawford's experiments we are obliged to fall back upon an analysis of his methods and processes of reasoning as given in his report.

It may be said at the outset that it is not surprising that this book has already made a strong impression on even most skeptical unbelievers. It is bound, I think, to attract wide attention and for a time at least to impress, so far as his experimental results are concerned, many interested in spiritistic and psychical matters. By those who have the "will to believe" the veridity of the author's observations and his conclusions will probably be accepted as final. By those

who have the "will to disbelieve" they will probably be rejected as fantasy run mad. At any rate the present, when all the world is agog over spiritualistic hypotheses and "super-normal" phenomena, is a most opportune time for the favorable reception of the book. The fact that Mr. Crawford is a mechanical engineer by profession and a lecturer in mechanical engineering in the Municipal Technical Institute and also in Queen's University, Belfast, attests his training in laboratory methods and his fitness for technical physical research. The experiments he reports are largely of this nature. The phenomena are physical, although linked up with spiritistic and psychical concepts and beliefs. The final explanation is physical although requiring concepts of a new form of "matter" and "force" unknown to science, and requiring the cooperation of mysterious "spiritistic" "invisible operators" who take part in the experiments and aid the experimenter and of "sitters" who contribute "psychical energy." In these days, when matter has disappeared as such under the progressive analyses of science and has been reduced to electrons, or foci of negative and positive electricity and fields of "energy," the receptive mind is prepared for new mysterious forces capable of turning topsy-turvy the world and the physical laws which govern it—as we know them.

The book is very well written and up to a certain point is a model of scientific exposition—that is of the data and experiments such as they are. It holds the attention throughout and tends to carry the reader along step by step with apparently satisfying proof, until the final "analysis of results" of the experiments on levitation without contact and conclusions, are reached. At this point, if the reader is of the type of mind of the reviewer, he asks himself "who is crazy? Somebody is crazy. Is it myself or somebody else?" I venture to say, from comments I have heard from other readers, that it takes some time, after reading, to regain one's mental equilibrium.

The greater part of the book deals with experiments on levitation without contact and to a consideration of these we shall be obliged to limit ourselves here.

These experiments deal with phenomena produced at a home-circle at Belfast in 1916-1917 and are a continuation of previous experiments already published in an earlier volume, "The Reality of Psychic Phenomena." "The circle referred to as the Goligher Circle consists of Miss Kathleen Goligher (the medium), her three sisters, brother, father, and father-in-law." Besides "spirit" raps, the chief phenomena consist of levitation and other movements and resistances of a small table thus described:

"The little table is standing on the floor within the circle formed by the sitters and is not in contact with any of them or with any portion of their clothing. Suddenly the table gives a lurch or moves slightly along the floor. After a while it may rise into the air on two legs (two legs being thus in the air and two on the floor). These movements—which are executed, as I have said, without physical contact with the medium

or the members of the circle—are the preliminary motions which usually take place just previous to the first levitation, i. e., before the table rises completely into the air of itself where it remains suspended for several minutes without visible support.

"I have seen hundreds of levitations under all conditions; standard levitations such as that mentioned above, abnormal levitations (such as where a stool rose four feet into the air and moved gently up and down for several minutes while we all examined it closely and while the medium was seated on a weighing machine) and freak levitations (such as where the table, being levitated, rocked in the air just like a small boat tossed about on a choppy sea). I have seen the table turn completely round in the air, and I have seen it levitated upside down and sideways. . . . although a heavy man sits upon the table it moves about the floor with great ease; or the table being levitated, a strong man pushing from the top cannot depress it to the floor; or the table moves to the side of the circle farthest from the medium and an experimenter is asked to lay hold of it and try to prevent its return to the centre, but he is totally unable to do so; or the table's weight can be temporarily so much increased that it cannot be lifted, or on the other hand so much reduced that it can be raised by an upward force of an ounce or two; or the table being turned upside down on the floor cannot be raised by a strong upward pull on the legs, being apparently fastened to the floor."

As just said the six members and the medium, clasping each others hands in chain order, sit in a circle about five feet in diameter. As the length of the top of one table given as a sample was 22 inches, it is easy to calculate that its distance from the "circle" of sitters was only about 19 inches. Its weight was $12\frac{1}{4}$ lbs.

But the medium and her six relatives are not the only persons who take part and are essential factors in the behavior of the table. There is also a group of "invisible operators" who play an important role. Indeed we are asked to "remember that the members of the circle . . . are only passive instruments in the hands of" these mystic individuals—"whoever the latter may be." How these spirits—if they are spirits—operate I will mention later.

The room is dimly lighted (p. 153) by a red light. (How dimly we are not told, though it would seem to be a matter of some consequence considering that in some experiments accurate observations are required).

Communication with the "invisible operators" who help carry on the experiments is held by "spirit" raps. These of themselves are not insignificant.

"Their magnitude varies in intensity from the slightest audible ticks to blows which might well be produced by a sledge-hammer, the latter really being awe-inspiring and easily heard two stories below and even outside the house. The loud blows perceptible shake the floor and chairs."

By such raps these operators convey considerable information regarding the mechanisms by which the phenomena are produced—believe it or not as you please.

At this point it is right to state that the author in the previous volume above mentioned has dealt with the reality of these psychic phenomena and has satisfied himself not only of their veridity, but of the actuality of his friends the “invisible operators.” He therefore in the present volume quite logically assumes that this aspect of the problem has been proved and there is no longer need of eliminating or testing for conscious or unconscious fraud on the part of the medium or the six sitters, or of the invisible operators. It is only fair to bear this conviction in mind in reading his fascinating exposition.

Now what is the author's hypothesis regarding the mechanism by which the levitation is accomplished? By the invisible operators boldly grasping the table and manipulating it, like an invisible juggler? Not at all. Nothing so commonplace as that. He conceives of a “psychic” rod, sometimes several rods, projected from the body of the medium—sometimes (apparently) from the stomach, sometimes from the ankles according to the exigencies of the phenomena. The operators testify to the existence of these rods and actually describe their size and shape. When, for instance, the table is levitated in the normal way the psychic rod projecting from the stomach acts as a cantilever, that is a rod which has a fixed end or support in the body of the medium and a free end which is applied to the table. The rod is rigid. It is a form of matter. It has weight. (Mr. Crawford has actually weighed it and found it may weigh as much as 50 lbs!) And yet it is impalpable and invisible. You can pass your hand through and across it and feel nothing. It is matter which is “driven out of the medium's body.” “The method by which it is expelled is a mystery” but, apparently, the operators extract it. Here, then, is a form of matter with which, as Mr. Crawford frankly states, science is unacquainted.

The rapping rods are somewhat different in form and size—at least so the invisible ones say. They too issue from and are fixed to the body, but are semi-flexible and considerably smaller than the cantilever, being about 2 inches in diameter. The invisibles, presumably grasping the rod, strike the floor or table with it, producing light little taps or ponderous sledge-hammer blows. Queer kind of matter this that is projected and so manipulated!

It is obvious that if a rigid bar were firmly fixed by one end in the medium's body and if a weight were applied to the other free end of the bar, the weight of the medium's body would be *increased* by the amount of the added weight.

If on the other hand, the rigid bar were bent upwards at approximately a right angle at about the middle or near the end, and at the bend it rested upon the floor, or upon a spring pressing upwards, the increased weight would be taken up by the resisting floor, or spring, and, in the latter case, the medium's body would *decrease* if the upward pressure of the spring were greater than that of the

added weight. Furthermore, if in the first case, that of a true cantilever, the added weight were of a certain magnitude, it would cause the medium to topple over forwards. In the second case no such effect would be produced.

Accordingly, to test the hypothesis, the medium was placed upon a weighing scale and it was found that in certain instances when light weights or pressures were applied to the table the medium's weight *increased*, in accordance with the cantilever theory; and, in certain cases when excessive weights were added the medium's weight *decreased*. (When the weight of the medium proportionately increased and the added weight reached a certain magnitude, the medium tended to topple over. When the medium's weight decreased no such disturbance of equilibrium occurred). All this was fully explained by the operators who said (after the idea had been naively suggested to them by Mr. Crawford, p. 34), that when light weights or pressures were applied to the table they used the bar as a cantilever, but when the weights were excessive they allowed the bar to rest upon the floor.

Various other experiments were made, which would carry us too far to go into, to test the cantilever theory. The results were found to accord with the principles of mechanics. All or much, happened *as if* the cantilever and rod hypotheses were true, and, it may be added, as if the statements of the "invisible operators" were true. The provisional hypotheses are therefore believed to have been proved.

The way in which the operators made use of the bar is not clear. They seem to be able to handle the psychic cantilever or bar as they please, place it where they like, and, apparently, I judge, change its shape, although this is not definitely stated, change the place of exit from the body, and project two bars or more. But it is the sitters who supply the "psychic energy," though it is not evident what this does, or who or what does what. The medium simply supplies the psychic substance or bar, which is extracted from her body. Who manipulates the bar after it is projected, also, is not clear. One is justified in assuming either that the invisible operators handle the bar (as they do the rapping-bar) and with it make the table perform these antics; or else that the sitters, by means of their psychic energy, act upon the bar and do the same. It is not clear why the invisible operators, if they can do this, should make use of such a complicated mechanism and not "go to it" and raise the table themselves. If they can handle the bar, why cannot they handle the table? Perhaps it will be said that they cannot influence ordinary matter like the table but can only do it through the intermediary of this new psychic substance. But almost all "invisibles" who do materializations claim they can. There is no record of questions put to the operators in regard to this point.

When we come to examine the actual data derived from the experiments we find them really very meagre. We have certain alterations in the weight of the medium and certain topplings over and other movements of her body, and we have certain evidences of pressure applied to the floor and in other experiments

certain resistances of the medium to pressure. This is about all. The cantilever and "strutt" hypotheses (the latter conceiving of a bent bar resting on and gripping the floor at the angle) are based for their proof on these data, and little more.

In all these experiences the experimenter is the sole responsible recorder. A very serious weakness therefore results from the fact that there were no other control experts to check up the observations of the experimenter, both in reading the scales in the dim red light and in observing the positions and movements of the medium and sitters. In scientific observations, to eliminate the errors of the personal equation, sometimes several independent observers are employed. Surely, in recording such extraordinary phenomena as are here reported, it is not asking too much that control observers should be employed.

As to the reasoning process by which the conclusions are reached, it all happens *as if* the hypotheses were true. Therefore they are proved. A skeptical critic may answer that all happens, also, as if other hypotheses were true: for example, as if all were due to unconscious fraud (many curious things, to say the least were noted, e. g., when a screen was placed between the table and the medium, or when the latter's back was turned to the table nothing happened!); or as if the data were obtained through errors of observation; or, if you believe in the "invisible operators," as Mr. Crawford does, as if all the phenomena, including the variations in the weighing scales, were produced by them by just ordinary lifting and pushing the table and medium with their hands, without taking matter from a poor medium's body.

The author's hypothesis, also, surely fails to account for much and cannot be reconciled with what is scientifically known as matter, or force, or electricity, or energy. It does not explain how practically anything is done and assumes the actuality of invisible persons or co-experimenters, which is going it strong. I am not concerned with the veridity of the levitation and other phenomena, but only with the author's extravagant hypothesis to explain those assumed to be true. I do not wish to be understood as offering anyone of these interpretations, but only that the data are too meager and too insufficiently attested to warrant so extravagant an hypothesis as has been advanced. Unfortunately Mr. Crawford's exposition of his experiments is marred by an intense "will to believe," which crops up all through the book. With so dominating a will it is to be feared that control observers are essential for acceptance of even the observations.

I have already said that Mr. Crawford assumes the veridity of the phenomena and therefore the lack of need of precaution against unconscious fraud. From his point of view he is probably justified in his method of experimenting. But it cannot be expected that this assumption will be accepted by an outsider as valid. Every one admits that even when bona fide phenomena are produced by a given medium, on certain occasions fraudulent phenomena of the same kind will be manifested. Therefore, in light of this universal experience, the scientific experi-

menter must insist that in every experiment the possibility of fraud shall be guarded against and eliminated.

The reviewer has entered into this lengthy and serious analysis and discussion of the more important experiments and conclusions because of Mr. Crawford's official position as a mechanical engineer and because of the earnest and systematic laboratory methods employed. If the work carried out by him had been reported by a less well trained experimenter we should have passed the book by with a brief notice.

MORTON PRINCE.

MODERN PSYCHICAL PHENOMENA, RECENT RESEARCHES AND SPECULATIONS. Hereward Carrington. New York, Dodd, Mead and Co., 1919. Pp. xi, 331. Price \$2.50.

In this book Mr. Carrington gives us, not so much the results of his own extensive adventurings in the occult, as a survey of the field of the psychical in general. He does include one curious and interesting paper describing personal experiments in the physiology of crystal vision. And in certain other papers he presents his views on such diverse subjects as the nature and destiny of personality, the problem of evil, psychic healing, and the psychology of "Alice in Wonderland." But his chief purpose evidently is to impress upon his readers the magnitude and complexity of the area attacked by investigators of the seemingly supernormal since the founding of the Society for Psychical Research. Our old friend the poltergeist is missing from his pages, he omits discussion of dowsing, and, perhaps because he has dealt with it abundantly in previous volumes, he makes little mention of automatism. Also he says nothing of the latest type of ghost, the panic-creating elemental. Yet his survey is complete enough. Any who wish an up-to-date handbook of the marvelous cannot do better than procure Mr. Carrington's present work.

In detail, and often in the words of the observers, he describes such eerie beings and uncanny occurrences as invisible ghosts that let themselves be photographed, the photographing of thoughts and even dreams, the production of astral bodies, ghosts that creep into sealed scientific instruments to set them in motion, horses that spell and calculate, and evil spirits that attack the neurotic to produce dissociation and insanity. Devotees of spiritism will here have a rare treat, particularly as the phenomena described are presented by one a little more than inclined to accept their supernormal origin. "A number of striking experiments seem to indicate, in the clearest manner possible, that, in addition to our physical body, we possess another body of the same shape, composed of a sort of etheric or semi-fluidic substance." "Whatever the interpretation of the facts, the conclusion to be drawn from this mass of evidence is that genuine supernormal photographs have been taken, and that thought-forms have apparently been obtained, as well as so-called 'spirit photographs.'" "There is much

actual evidence that, in some cases at least, genuine 'obsession' of the spiritualist's variety is a fact."

Of course, to statements such as these, as to the narratives of astral action, spirit photography, and so forth, the trained worker in psychology normal or abnormal will react very differently from the spiritistic enthusiast. "Rub-bish," "nonsense," and "preposterous," are words that may surge spontaneously up in his mind. He may reflect, too, on the ease with which judgment is led astray under the influence of "the will to believe." But Mr. Carrington can retort—as indeed he does retort—that there is such a thing as a will to disbelieve. In the words of the lamented William James, "we all live on an inclined plane of credulity, and let him whose plane tips neither in one direction nor the other be the one to cast the first stone." The fact of the matter is that, altogether apart from the central problem of spirit survival, it may very well be that even the most bizarre of the phenomena described by Mr. Carrington may throw new and practically important light on mental processes and powers.

Certainly psychology already owes much to psychical research—though perhaps not so much as Mr. Carrington would insist—for its present understanding of the subconscious and its present ability to explore subconscious mental states for medical and other purposes. (Take, for example, the use of the crystal for the study of hystericals, first applied by Janet, who got it from the psychical deliver Myers, who got it from his co-worker in the psychical, Miss Goodrich-Freer.) And it is not reasonable to suppose that larger knowledge does not remain to be gained. The astonishing discoveries of the past few years go to justify the opposite supposition that we are only now beginning really to understand mental mechanisms and capabilities. Conceivably, then, the strange happenings of which Mr. Carrington writes afford means of approach to larger knowledge. Only investigation and experiment can determine this, and psychology may well join hands with psychical research in a systematic probing. The seeming impossibility of the alleged facts should be no sufficient bar to inquiry. There was a time when meteors were accounted merely alleged facts and absolute impossibilities. So far as that goes, there still are sundry educated folk who question the actuality of the subconscious.

In other words, Mr. Carrington's curious contribution to the literature of psychical research—a contribution written with felicity as with facility—should not be dismissed as a bringing together of imaginings and incredibilities. It is not a mocking of the intelligence but a challenge to the good faith of science. Shoulder shrugging will get us nowhere, never has gotten us anywhere. And the present writer for one hopes that science will earnestly apply its resources to ascertain the true significance of that at which many men now exclaim in wonder, while many contemptuously ignore or sarcastically deride.

H. ADDINGTON BRUCE.

PSYCHOLOGY FROM THE STANDPOINT OF A BEHAVIORIST. By John B. Watson, Professor of Psychology, The Johns Hopkins University. Philadelphia and London, J. B. Lippincott Company, 1919. Pp. xiii, 429; figs. 66. Price—.

This volume is an interesting and valuable treatise on social or applied physiology, and as such serves to be taken weightily in all but its name. It is no more psychology than a knowledge of the construction of tracks, draws, locomotives, and car trucks and their action is the science of railroading ample to solve the present important railways problem; no more psychology than a description of the apparatus and its action in Harvard's observatories is astronomy. "The science of physiology deals with part reactions * * * whereas psychology deals with the adjustments of the organism as a whole" says Professor Watson (p. 193), but fortunately the world-meanings of important concepts are not so easily nullified and changed even by the recognized pioneer of behaviorism in the Johns Hopkins chair. One might think we should be grateful (although somehow we are not *very* grateful) that, as the author says in his preface, he has "retained such terms as thinking and memory," although "carefully redefined"; and he seems almost to apologise for retaining "attention" plainly one of the most somatic of psychologic terms. And when Doctor Watson maintains that it is neither, as Titchener said, a revolt in psychology nor, as Miss Washburn terms it, a revival of objectivism, we are inclined to agree with him, feeling strongly that it is only an attempt to embezzle a perfectly definite and respectable science known as physiology, scratch off some of its privileges of alluring paint and polish and to sell it to the unsuspecting as psychology—and certainly, despite Old H. C. L., at a considerable advance in the 1914 price. As an ex-physiologist the present reviewer congratulates the author on his splendid effort to show the physiologists the road to a physiology well worth their thought (pace tua!) and their time—"the continuous adjustment of internal relations to external relations" in the material range.

The contents of the book, as indicated by the eleven chapter-headings, are as follows: "Problems and scope of psychology. Psychological methods. The receptors and their stimuli. Neuro-physiological basis of action. The organs of response: muscles and glands. Hereditary modes of response: emotions. Hereditary modes of response: instincts. The genesis and retention of explicit bodily habits. The genesis and retention of explicit and implicit language habits. The organism at work. Personality and its disturbance."

This pioneer writer of modern materialism is thus seen to have discussed in the present volume a number of topics, and discussed them well, that are as meat and drink to a progressive psychology, properly so called. Chapters III, IV, and V consist of the familiar material, in cut and in letter-press, to be found in many places, psychologic as well as physiologic. But chapters VI and VII, (emotions and instincts respectively) have a new atmosphere about them, mostly because of their new research material of the genetic kind. Watson's definition of emotion shows the cool ignoring of mental processes wholly characteristic of

the book. "An emotion is an hereditary 'pattern-reaction' involving profound changes of the bodily mechanism as a whole, but particularly of the visceral and glandular systems." A scientific plan that could thus deliberately ignore the affect of emotions could with seemingly good conscience put on the screen a "movie" of the Fifth Symphony as played by a large orchestra on a brightly lighted stage, or of the lovely personality of a happy three-year-old; he might even expect to show us, did we sit in front, his own behavior as he wrote this book, expecting us to imagine all the rest! And yet the book itself belies any such implication of physiology, for it contains evidences of both thought and feeling, and of well-planned work.

As some might expect, the chapter on instinct is all that might be asked. It is a fundamental treatment of this topic. He thinks (pace!) that most of the asserted instincts are really consolidations of instinct and of habit—an easily-accepted opinion.

Chapter IX, on language-habits, is perhaps the best discussion of the body-side of conceptualization recently published. The suggestions for language-research in the future are well worth repeating, especially considering that the physiology of thought so far has had much less than its useful share of study. Watson says that the following points would be of special interest to psychologists: The acquisition of language in blind deaf mutes; the symbolic and folk-lore side of our own and of other languages; stuttering, etc.; the effect of central lesions on language-mechanisms; the speech of psychopathic individuals, maniacs, paralytics, paranoiacs for examples, slang and profanity in relation to emotion; and the language-system in dreaming by day and by night.

Chapter X, giving us much interesting matter, some of it new, on the organism at work, discusses fatigue, the work-curves, drug-effects, climatic relations, sexual differentiation, habit-acquisition factors, the conditions of learning, and so forth.

The eleventh chapter sets forth the behavioristic notion of personality—the reaction-mass made up chiefly of habit-systems, instincts, and emotions. Watson pays his skeptical respects to various familiar ways of judging personality—voice, attitudes, gesture, gait, phrenology, portraits, biological, characteristics, handwriting (Baldo, Binet, Crépieux-Jamin, Downey, Hall and Montgomery). He is inclined to believe that even the disease of a personality may arise from habit-distortion, (beyond the reach of compensatory factors) starting often in infancy as indulgence by care-takers.

The illustrations are adequate and some of them original. The book is written in a clear style and is well printed and bound. The index is adequate, but a table of contents would add to the usefulness of the volume.

As a text-book for some college course requiring in addition a text-book of real psychology, the work has a place, as it has interest abundant for the physiologist and the neurologist. To employ it in lieu of a treatise on the mental process, however, (were any institution so rash) would be to deprive the student

of part of his birthright, for it ignores the only part of the personality in which the average individual has much interest, namely, himself as a sentient being.

GEORGE VAN NESS DEARBORN.

DIAGNOSTIC SYMPTOMS OF NERVOUS DISEASES. By Edward Livingston Hunt, M. D., Assistant Professor of Clinical Neurology, College of Physicians and Surgeons, New York, etc., etc. Philadelphia and London, W. B. Saunders Company, Second Edition, revised, 1917. Pp. 292; figs., 64.

"My students at Columbia," starts the preface, "have asked me for several years to name a book in which they could find the salient points and leading symptoms of the principal nervous disease without the laborious search involved in consulting the larger text books. This book, written to supply such a demand, is intended for the student, the intern, and general practitioner, both as a reference and as an aid to diagnosis." With all due credit to the theoretic pedagogues who would make of all men forthwith profoundly learned *savants*, the present reviewer believes that there is a proper important use for such books, just as there is for medical quiz compends: they serve to refresh and to systematize conceptually many a busy man's knowledge of a topic, or even of a subject, which otherwise would never be either systematized or refreshed. Such books seem not only expedient but pedagogically sanctioned.

Few of them are as good as Livingston Hunt's, for he knows how to teach, as many Medical Corps men who had the courses conducted at the Neurological Institute, at the P. and S., and all about town, in the summer of 1918 could gladly testify. His clinics on the Islands were a delight.

The wide range and usefulness of the volume are indicated sufficiently by the seventeen chapter-titles, which are as follows: "The examination of a nervous case" (including the "Outlines for Clinical Examination," copyrighted, curiously enough, by the Department of Neurology, Columbia University). Deformities, Paralysis, Tremors, Trophic disorders, Spinal localization, Gaits, Ataxia, Convulsions, Sensation, Reflexes, Vertigo, the Eye, Disturbance of speech, Aphasia, Cerebro-spinal fluid, Electric reactions, and the Index.

As an illustration of the author's mode of treatment of most of these topics we may cite the gist of his valuable chapter on gaits. As he says, "not only is the gait a leading symptom of diseases of the spinal cord, but it also occurs with affections of the brain and even functional conditions. The student will find that he is amply repaid for the time he devotes to this subject." (And what the "student" in the narrowest sense finds valuable the usually older student of neuropsychiatry is certain to find of use whether in his self-sufficiency he thinks so or not; the wise man of course, is a student ever.) Our author describes ten gaits besides the normal: the ataxic, the hemiplegic, the steppage, the spastic, the clumsy, the cerebellar, festination, the staggering, the gait of hysteric conditions, and that of arteriorclerosis. It is poor objection to such an assorting to say that they merge and combine indefinitely into each other,—for so do

most scientific classes; yet science must have concepts; *veritatis simplex oratio est non*. Twenty-two pages are devoted to gaits, each of the latter being described and the discussion made immediately of use in many cases by a list of the chief diseases showing it. For the medical student and the less experienced practitioner these are of great diagnostic use.

This book provides much of the skeleton on which much neurologic diagnosis may be vitalized. To many a man who thinks himself far beyond or even "above" it, it would be of far more value than the most expensive set of textbooks in print; and its own price is small. The illustrations, nearly all of which are original, are excellent both graphically and educationally. Professor Livingston Hunt's little book should be known even more widely than it is.

GEORGE VAN NESS DEARBORN.

Boston City Hospital.

RELIGION AND SEX. STUDIES IN THE PATHOLOGY OF RELIGIOUS DEVELOPMENT. By Chapman Cohen. London, T. N. Foulis, 1919. 287 pp. Price 6s.

Evidently this book was largely a reaction to: James' "Varieties of Religious Experiences," which is characterized as a "remarkable piece of religious yellow journalism * * * a glorified revival meeting in an expensive volume."

The author modestly affirms that his book "does not claim to be more than an outline of the subject, a sketch-map of a territory that others may fill in more completely." He does not write as a pathologist nor as a psychologist. On the contrary he assumes the role of a historian of pathologic religious symptoms. These are not treated from the viewpoint of case-studies of individual humans, but from groups as these are organized into larger social movements. From the professional point of view it is not a controversial book, for it deals almost entirely with conditions that are admittedly pathological. The book is almost void of the discomforting discussion of the more normal and borderland religious manifestations. The author is content to prove that religious institutions and thought, and religious valuations, have been and are largely dominated by these pathologic states which he sets forth and which modern thought generally separates from normal religion.

It will be comforting to many to be assured at the outset that the object of his inquiry excludes the wider and perhaps more difficult field of the possible erotogenetic interpretation of all religions. Still others will be glad to be reassured that this volume gives no hint of any acquaintance with psychoanalysis. Again, while disclaiming any investigation of eroticism in the philogenetics of religion the author makes investigation unnecessary by the dogmatic assurance that: "Neither sexuality, no matter how powerful nor how diseased, no matter how pronounced, can account for the religious idea. That has an entirely separate and independent origin." Being entirely innocent of any Freudian taint the author can add: "This should be plain to any one who has but

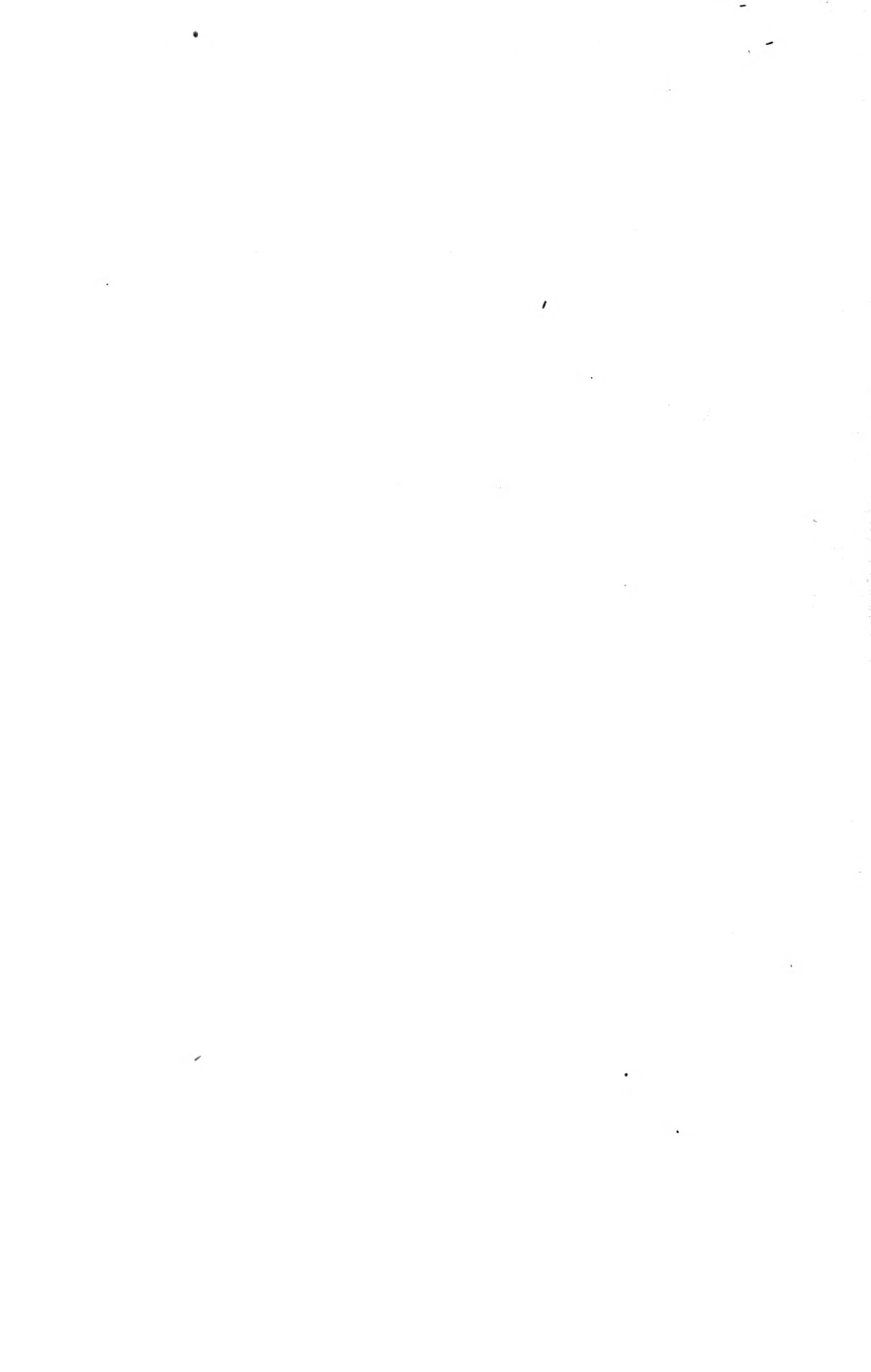
a merely casual acquaintance with the history of religion." These facts also tend to recommend the book to many timid readers.

In such spirit we get a hurried review of anthropologic literature and some impressionistic sweep over phallic worship. But the main emphasis is placed upon the erotisms and pathology of heretical sects, monastic institutions, asceticism, the crusades and witchcraft, with a lesser emphasis than usual upon the erotism manifested in the lives of the "saints."

If Mr. Cohen is a determinist it is with "limited liability" for he obviously is very moralistic, but irreligiously moralistic. This is shown when he holds Christian ideas responsible for the evils associated with Christianity, rather than to charge them up to the underlying impulses which made those creedal intellectualizations acceptable and gave them their great potency. Those qualities of the book which I esteem its weakness will be its strength with that part of the public for whom the book was designed. It is moderate in tone, evinces a wide reading, is free from such technical discussions as are suggested by its sub-title and is relatively conservative in its conclusions. From this viewpoint it should be counted among the more efficient items of anti-Christian literature.

The author is a Freethought propagandist who is widely known in Great Britain. From that viewpoint this book marks a departure from the former literature coming from the same general source. Hitherto the attacks upon Christianity have dealt with the accuracy of its teachings, the historicity of its founder and the ethical value of its moral creeds. In terms of pathology, this book attempts to explain the potency of Christianity, independently of its verity or divinity. More of that type of discussion is needed because it is always more illuminating.

THEODORE SCHROEDER.



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ORIGINAL ARTICLES

A SUBCONSCIOUS PHENOMENON

BY CHARLES E. CORY, PH.D.

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IN HIS essay on Dreams, Henri Bergson makes the statement that the great discoveries of the last century were in the physical order, and that those of the twentieth century will probably be in the realm of the subconscious. Studies made in this field during the decade just past support the belief that it promises to reveal facts that will be, at least, as significant as those that await our attention in the physical world. And if, as I believe, there are many signs and indications that we are approaching a great world-wide humanistic movement, this growing insight into the tendencies and forms of human nature that lie below the level of consciousness will occupy a large space in that vital psychology which is yet to be written. We are beginning to see that beyond the borders of consciousness there is a vast hinterland in the depths of which are to be found forces and influences that are indispensable if the narrow strip that is exposed to consciousness is made intelligible. Into it we have gone far enough to know that it contains the springs of creative activity, and also pools of stagnant water; in it are the sources of power, and also the breeding places of disease and confusion. And we have gone far enough to have every reason to believe that whatever may be discovered in this obscure region will fall under the principles of science, even though they may conflict with some of its dogma.

The case described below is, indeed, only a modest contribution to the rapidly growing mass of data bearing upon the problem of the subconscious. Automatic writing is now common enough, and



this phenomenon is, in general, of the same character. It has, however, some novelty, and will be, I believe, of some value to students in this general field.

About eight years ago Miss Mazie Fitzroy of St. Louis, while attempting to draw the face of a nephew who had recently died, discovered that her hand and arm were moving without her control. Being curious, she permitted the drawing to proceed. The result was a face, but one that bore no resemblance to that of the nephew. Since that time a large collection of drawings have been made.

Miss Fitzroy is a woman of fifty years of age, one of five children, all living. She has never married. Her father died when she was twenty; her mother is living. On neither side has anything been found of significance. Miss Fitzroy is, and has been for years, rather delicate in health. She has never, however, had any serious illness, and aside from a gradual impairment of her hearing she has no organic trouble. As a child she was unusually fanciful and this psychological trait has continued through her adult life. Her imagination reaches a vividness that approaches hallucination, and the imagery is visual. From childhood she has been a constant reader, and much of her pleasure in reading, she says, is due to the rich imagery that flowers out in her consciousness. This spontaneity of imagery has, of course, a direct bearing upon the drawings, and has been studied with some care. In the form that it takes it indicates a tendency toward dissociation, a weakness in the mind's correlating function. Music, Miss Fitzroy is a trained musician, also produces this marked visual imagery. And upon three different occasions elaborate hallucinations have been experienced. These hallucinations appeared at wide intervals, and at times when there was some emotional strain. They, together with the unusual character of the imagination, show conclusively that dissociation lies near the surface.

Two additional facts, when coupled with those already mentioned, are not without significance. The subject is a woman of strong feeling, and also extremely reserved in the expression of those feelings. This natural reserve has provided a complete and systematic repression of her emotional life, and this constant inhibition has had, to my mind, much to do in producing a general condition that underlies the specific phenomenon under consideration; it is a factor without which the phenomenon would, in all probability, not have occurred. Further, this natural reserve has been intensified by the loss of hearing. At the age of twenty her hearing began to fail (a sis-

ter has also had the same experience), and this, as is not infrequently the case, has turned her life inward, making it more subjective and increasing its natural insulation. A double repression has, then, thus been built up, and back of it there is a quick and strong current of feeling, one which has been fed by much reading and contact with art. For some time music was an outlet, but with the loss of hearing it was discontinued.

So much for a general statement of the case. It gives a significant background. With the aid of hypnosis a more minute analysis could have been, no doubt, obtained, but such means were not agreeable to the subject.

A word now regarding the drawings. Many of them have, in the judgment of professional critics, considerable artistic merit. They generally require from six to ten minutes. Occasionally nothing is drawn. Generally, however, the drawing starts immediately. What the drawing will be is, Miss Fitzroy asserts, unknown to her. And that this is a statement of fact I have not the slightest doubt. An examination of the arm during the drawing shows that a degree of anesthesia exists, and if the drawing is prolonged a pronounced numbness sets in. This fact confirms the automatic character of the performance. Upon one occasion, when attempting to draw blindfolded, the numbness spread over the whole organism. It should be added that Miss Fitzroy is perfectly innocent of any theory or explanation of what takes place. At no point does one uncover motives for imposture, and as one gets a more intimate acquaintance with the whole situation the question of genuineness is put aside. When drawing, the subject goes into no trance. Aside from the modifications already noted nothing abnormal is observable. It is more than probable, however, that in taking the drawing posture some degree of abstraction is produced. Continuous and absorbed conversation may be carried on without any apparent influence on the movement of the hand. The technique used is full of all kinds of caprice. Many of the earlier drawings were signed with initials. These were not written, as would ordinarily be done, but the space forming the letters was left when the dark background was filled in. When the picture is finished the hand makes a wide flourish, and the pencil falls; a vague sense of release is also reported to be felt at its completion.

An interesting thing sometimes occurs during the drawing. If the pencil is worn on one side Miss Fitzroy describes it as turning in her hand. She says she has a keen sense of its being turned in



spite of every effort to the contrary. What takes place is, of course, that two sets of impulses are expressing themselves in her hand, the subconscious impulses turning the pencil against movements initiated by consciousness. The fact that only the resisting group of impulses is identified with consciousness would produce the feeling that a foreign force was operative. The experience described by Miss Fitzroy calls to mind the "water-witch," and the explanation of the one will also do for the other. And, in passing, I may say that it would be interesting to study adepts with the forked stick for other signs of dissociation, which, so far as I know, has not been done.

I have said that art critics find many of the drawings to possess real merit. There is a subtle shading of expression, a delicate sketching of character in most of them. The faces are distinctly not modern. In but few is there more than the head or bust. There seems to be no sexual preference. This does not, of course, exclude the possibility that one of the many casual factors that lie at the roots of the matter may have been of a sex character. What weight, if any, to give to this possibility the data so far secured affords no means of answering. Many of the faces drawn are those of children. These may appear either singly or in groups, and occasionally several faces may be found dimly sketched in the background.

None of the drawings, according to Miss Fitzroy, resemble in any way people she has known, and, as I have said, they seem to me decidedly not modern. However, as an art student for many years she was constantly exposed to impressions that could easily provide the various types of faces portrayed. The general source of the material is, thus, not far to seek. A careful comparative study of the faces with works of the earlier artists might determine the question of source more definitely, and should such a study reveal any striking or close resemblance this fact would have some psychological value. Just such an effort will shortly be made by a well-known St. Louis artist. This much seems certain, that it was in the early period of her life that these impressions were received. And, being at that time a student of art (in particular drawing), the atmosphere of the gallery and studio would produce a receptivity not elsewhere experienced, a sensitive condition which no where else existed. Then, too, the contact with the world of art and literature has always been for the subject more vital and free than has been her contact with the actual world of fact and its people, *and only where the mind is free is it receptive.*

Not far below the surface, it would seem, there exists, in dream-like fashion, a stratum of imagery that under certain conditions, that is, a formal abstraction produced by the posture of drawing, is enabled to find its way out in appropriate movements. The abstraction defocalizes the nervous system sufficiently to permit the dissociated complex the use of the arm and hand. The complex may have existed before the act of drawing, or it may have been engendered by or with the complete drawing process. Just which statement describes the facts will depend, it seems to me, upon how far dissociation has progressed, or to what degree the self has been disintegrated, and this cannot be determined from without. The data at hand leaves the question open as to whether the cleft is slight or profound.

The fact that the drawings have considerable merit is not surprising when it is remembered that Miss Fitzroy has had a somewhat extended training in art. Their psychological value is, of course, not affected by this information. That value consists in the fact that they are subconscious productions. For some time we have been raising the question as to just what the subconscious mind can accomplish. What degree of ideation or coordination of movements is it capable of? These drawings have their value in so far as they throw some light upon the answer to this question, a question that is pressing into the center of the field of all vital psychological discussion. Art, it has been assumed, is an expression of mind in one of its highest functions. It is at the extreme remove from the sporadic and the mechanical. Beauty, said Plato, is the most difficult thing in the world. It is the very embodiment of idea. And yet here we have subconscious processes very credibly performing this same feat.

If it were possible to put out an inexpensive edition of reproductions of these drawings it would provide excellent illustrative material for those interested in presenting the general subject of subconscious phenomena.

A SYSTEM FOR EXPLAINING AFFECTIVE PHENOMENA

BY LEONARD THOMPSON TROLAND

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I

THE following is a brief outline of a general view of the psychophysiology of affective phenomena which I have developed in connection with my classes during a number of years. It presents, I believe, some really novel features, but its principal merit lies in the manner in which it combines not only a large number of facts but also many theories with which we are already familiar.¹

II

The data of modern introspective psychology permit us to define a variable, which we may call *affective intensity*, as an algebraic quantity positive magnitudes of which are to be identified with the degrees of pleasantness of conscious states, while negative magnitudes represent the degrees of unpleasantness of such states. A zero value stands for indifference. This quantitative conception is supposed to be capable of formulating any possible affective value in consciousness regardless of the nature of the consciousness in respects other than the affective.

Various hypotheses have been advanced as to the identity of the physiological factor which is correlated with affective intensity as above defined. The exact nature of any such hypotheses must depend upon the general theory of the physiological basis of consciousness as a whole which is accepted. The view which I shall adopt is the traditional one that the entire introspective experience of any individual depends upon the nerve processes taking place in a limited portion of his cerebral cortex. We know that the cerebral cortex is mainly composed of gray matter, the dominant functions of which

¹Among such theories should be mentioned in particular that of Max Meyer, which in mathematical form is very similar to the one which I outline in this paper. The difference between the two theories, however, appears to me of essential significance, since the consequences to be drawn from the statement here offered are very much broader than those of Meyer's theory, although they include the latter. I am uncertain to what extent I am indebted to Meyer's theory in the development of my present views.

undoubtedly lie in the so-called *synapses*. It would, therefore, seem pertinent to look for the physiological basis of affection in some synaptic process.

Many facts of nerve physiology indicate that the inherent characteristics of any nervous are which determine its specific activity are located in its synapses. It is at synapses that specific nerve connections are established and the exact characteristics of the nerve conduction process are regulated. The most important conception relating to the properties of the synapse appears at the present time to be that of its *resistance* to the passage of a nerve current. Upon the magnitude of the synaptic resistance depends the ease with which a given afferent current passes over into any efferent path, and it is therefore probable that the specific nature of the motor reaction to a given sensory stimulus depends upon the exact distribution of synaptic resistances in the central nervous system.

For our present purposes it will be more convenient to speak of synaptic *conductance* than of the corresponding resistance, the conductance being the reciprocal of the resistance. The fundamental assumption of the theory which we have to consider in the present article may be expressed as follows: *The affective intensity of any individual consciousness is proportional to the average rate of change of conductance in the synapses the activities of which are responsible for that consciousness.* This postulate may be expressed mathematically. If c is the average conductance of the synapses and a is the affective intensity, then:

$$(1) \quad a = k \frac{dc}{dt}.$$

k being a constant, and $\frac{dc}{dt}$ being the usual expression for the rate of change of c with respect to the time t .

It is perhaps necessary to point out that a rate of change, like affective intensity, is an *algebraic* variable, of such a character that a decreasing conductance will mean a negative rate and an increasing conductance a positive rate while absence of all change will yield a rate of zero. Accordingly, increasing conductance implies positive affective intensity or pleasantness, while decreasing conductance must involve negative affective intensity or unpleasantness. No change in conductance will entail zero affective intensity, or a state of indifference. It is clear that the absolute level of the conductance, whether high or low, does not enter into the relationship at all.

III

In order to develop the implications of the hypothesis above advanced regarding the physiological basis of conscious affection it is necessary to know under what conditions the conductance of cortical synapses changes. It should be borne clearly in mind that, since we have supposed the introspective consciousness to depend upon the cortical process and directly upon this alone, the activity of other portions of the nervous system can influence consciousness only *indirectly*, through the medium of the cortex. However, it is probable that all cortical processes are dependent upon other nerve processes occurring outside of the cortex, so that it is to the relation between sub-cortical and cortical activities that we must next direct our attention. It is obvious that as regards affection the problem is that of the external causes of changes in the conductance of cortical synapses.

The most familiar condition under which an increase in the conductance of a synapse occurs is that of simple *exercise*. The mere passage of a nerve current through a synapse is commonly supposed to break down its resistance and thus to render it more conductive for subsequent similar currents. This process, however, follows a law of diminishing returns, a maximum conductance finally being reached which represents the physiological limit of the increase. This corresponds with the familiar "learning curve." In the human being nearly all learning is cortical and intimately related with consciousness, so that we should expect this condition of increase in synaptic conductance to be an important one to the theory of conscious affection.

The affection in question, in accordance with our fundamental assumption, would of course be positive or one of pleasantness. The pleasantness thus conditioned is to be identified with that of *novel experiences*. We know from everyday life that pleasantness which is attributable merely to novelty quickly wears off with repetition of the original stimulus, a fact which is in harmony with the asymptotic form of the learning curve and the demands of our theory. The importance of the principle of novelty as a source of pleasure in human life is undeniably very great, so that this development of our theory will probably be found to cover a wide range of affective phenomena, involving all departments of sensation and also processes of imagination, association, thought, etc.

The opening up of synapses by the law of exercise is due to the action of afferent nerve currents upon the cortex. A study of the

subject indicates, however, that not all afferent currents act upon the cortical synapses in the same manner. Some of these currents, instead of increasing cortical conductance, apparently decrease it, at least along certain lines of conduction. These afferent currents are the ones which arise in those sense organs which Sherrington calls *nociceptors*. The most important nociceptive system is the so-called pain sense, which is stimulated through the free nerve endings of the skin and viscera. Other nociceptive mechanisms are those of cold sensibility, gustatory bitterness and sourness, certain olfactory sensibilities, etc. A study of the facts indicates that the excitation of any of these afferent systems tends to block or to *inhibit* any nerve current which is passing through the cortex at the given time.

The simplest way in which to explain the blocking action of these currents is to suppose that the afferent systems which carry them are so connected with the cerebral cortex that their activity brings about a *decrease* in the conductance of the cortical synapses which are functioning at the moment. We may tentatively identify inhibition with a process of decrease, or negative rate of the change, of synaptic conductance. It should be clear in what manner this system of relationships explains the unpleasantness which is the normal result of stimulating the pain nerves or any of the other receptors referred to as nociceptive in character. When a pain nerve is excited the form of response which allowed such excitation to occur is cut off by the action of the pain system on the cortical synapses which control that response.² From the purely physiological point of view this is simply a protective mechanism. On the psychological side, however, it involves an unpleasant state of consciousness, which unpleasantness is referable to the decrease in the conductance of the cortical synapses caused by the excitation of a nociceptive system.

Corresponding to the nociceptors and their attached nervous mechanisms we find certain sensory systems which instead of inhibiting cortical activity especially *facilitate* it. These departments of sensation might be designated as *beneceptive*, since in general they involve the action of stimuli which are beneficial to the individual or the species. The most important of these systems is that of the sexual or erogenous sense. Other beneceptive mechanisms are those of gustatory "sweet" and "salt," the warmth sense and the olfactory responses to fragrant and aromatic substances. When these particu-

²It should be recognized that the "response" in question may be a simple *posture*. Cortical inhibition does not imply motor inactivity but rather motor *writhing*.

lar afferent channels are stimulated, instead of blocking cortical activity by decreasing synaptic conductance, they apparently aid it by increasing such conductance. The psychophysical inferences to be drawn are obviously of the same sort as in the case of the nociceptive systems, any action of a beneceptive channel upon the cortex producing in consciousness a positive affection, or a state of pleasantness.

It is to be supposed that these general mechanisms of cortical inhibition and facilitation are laid down by heredity. Their biological function is to control the random, inventive, activity of the cerebrum, to interfere with lines of conduction through the cortex which threaten the welfare of the organism, and to reinforce types of conduction which further its welfare or the welfare of the species. The cortex being the organ of the process of "learning by experience" naturally has at the outset a high degree of flexibility in its activity. But its necessary initiative needs to be checked up in terms of the practical effects of "experience." This "checking up" mechanism is provided by the bene- and nociceptors.

This sort of influence, exerted by a beneceptive or nociceptive sense channel upon the cortex, may be called *retroflex action*, since it is a sort of back action upon the cortex. In a sense a retroflex action may be regarded as the inverse of a reflex action, since the initiative in the process is that of the cortex and the final effect also has the same locus. In this process the modes of conduction through the cortex are regulated by the *practical effects* of cortical initiative in any given environment. A retroflex circuit, if we may speak of such a thing, is not of course a complete nerve circuit, but involves the environment itself as an essential link.

IV

It is clear that any process of increase of synaptic conductance must leave the conductance at a higher level than it had before the process occurred. On the other hand, a process of decrease will establish a lowered conductance. Thus the processes of inhibition and facilitation, as we have interpreted them, must leave permanent records of their nature and degree in the cortical synapses.

This consideration has interesting implications with regard to the relation of affection to tendencies towards specific lines of action, and points to a definite form of *psychological hedonism*. At least three

different forms of this latter doctrine can be discriminated. Bentham's doctrine that "pleasure and pain are our sovereign masters" may mean either (1) that we follow the dictates of *present* affection, or (2) that we are controlled by *anticipated* affection, or (3) that our choices depend upon affection experienced in the *past*. The first two forms of the doctrine have been emphasized to the greatest extent in the history of the controversy, but have been proven inconsistent with the facts. Our theory, however, implies only the last form; it is past, not future nor even present "pleasure and pain" which control our will. This principle harmonizes with the facts.

The manner in which this conclusion is reached may be indicated as follows. We may suppose the cerebral cortex to present possible lines of connection between sensory and motor mechanisms such that any conceivable motor reaction might follow from any conceivable sensory stimulus. The line of connection which is actually operative must involve the selection of the path of greatest conductance through the net-work of possible cortical connections. If we assume that primitively all lines of conduction were of equal conductance, the dominance of any particular line over others must be attributed to changes in the conductance of this line relative to that of others during the life of the individual.

Any such changes, however, would be represented by affective experience on the part of the conscious individual. The conductance of any given synaptic system at any time would necessarily be represented as the sum of its original conductance and all increments of conductance, minus all decrements of conductance which it had suffered up to the given moment. This measure could be expressed mathematically as the "time integral" of the rate of change of conductance of the given system for the time span under consideration, as follows:

$$(2) \quad C = \int \left(\frac{dc}{dt} \right) dt + K$$

C is the final conductance of the system, c is the conductance at any time as in equation (1) and K is the so-called constant of integration, which represents the initial conductance. It is obviously legitimate to substitute in equation (2) an expression for $\frac{dc}{dt}$ derived from equation

(1) viz. $\frac{c}{x}$. We then have:

$$(3) \quad C = \int \left(\frac{a}{k} \right) dt + K$$

The expression $\int \frac{a}{k} dt$ or $\int a dt$, neglecting the constant, would be called technically the "time integral of the affective intensity." In more popular terms, it represents the *total amount of affection* experienced during the given period of time measured in terms of positive affection, amounts of negative affection being subtracted from the total positive amount. This conception of the time integral of affective intensity I regard as the scientific equivalent of the popular term "happiness."

It appears from the above reasoning that the total amount of affection experienced in connection with a specific line of response is proportional to the total increase of synaptic conductance for the form of response in question. If we consider the total life experience of the individual and assume that primitively all cortical connectabilities were equal it follows that the total amount of affection which has been associated with any given form of response must be recorded in the present cortex by the degree of dominance of that particular form of response with respect to others. In the case of competition between response tendencies that one will triumph which has the greatest total amount of affection associated with its development. This quantity, in the phraseology of Hans Driesch, constitutes the "historical basis of reacting." *Present* affection in the strictest sense can have no influence upon choice, since the present is a mathematical instant and therefore can develop no finite value of $\int a dt$ but the passage of time enables the affective intensities of successive moments to establish impressions. Anticipated happiness is, of course, entirely without effect save as the anticipation which is present, or past, possesses affectivity of one sort or another.

It will be clear to anyone accustomed to quantitative thinking that although the above reasoning is stated in terms of positive affection it actually embraces all negative terms of the same sort. "Unhappiness" is simply negative happiness, and the total happiness value of any span of experience is necessarily the surplus of positive happiness over negative. Exactly similar considerations apply to increments of conductance, decrements—which are associated with unhappiness—being simply negative increments. The total increase of conductance during any given period must obviously be the surplus of the sum of all the increments over the sum of all the decrements. A given form of response may become dominant either because of incre-

ments in its own conductance, or, on the other hand, because of decrements in the conductances for all other possible forms of response.

V

The practical significance of the retroflex mechanisms above described obviously is greatly enhanced by the permanency of the effects which they produce upon the cortex. Now, the empirical study of the processes which we have denoted by the term retroflex action indicates that the permanent record left in the cortex involves not only a *quantitative* modification of a given response tendency but also its *permanent association with the retroflex mechanism* which was concerned. For example, if a certain form of response is once inhibited because of the fact that it causes stimulation of the pain nerves, when the original stimulus to this reaction again appears it will re-arouse the retroflex process which was originally aroused only by pain stimulation. In terms of what is known in physiology as Pavlov's Law, the retroflex function of the pain sense has become *conditioned* by the stimulus in question. This stimulus has therefore been rendered capable of producing, by itself, decreases in cortical synaptic conductance. Similarly, a positive retroflex function involving facilitation of cortical activity can become conditioned through experience by specific stimuli with which it is not connected with by heredity.

Such associations of primitively neutral³ stimuli, or forms of reception, with retroflex mechanisms correspond on the physiological side with what the Freudian psychology calls "complexes." Complexes always involve the association of some inhibitory or facilitory tendency with a primitively neutral "idea" or group of "ideas." This association is the result of some experience which so far as the individual is concerned may be regarded as accidental. On the psychological side, of course, a complex involving inhibitory tendencies must be unpleasant, while one which is linked with a facilitory tendency will be pleasant.

In accordance with the above interpretation, complexes may be founded not only upon sex—the basis most stressed in the Freudian theory—but upon any primitive retroflex tendency. Sexual tendencies are undeniably of great importance, but the pain mechanism is probably even broader in its significance. Gustatory, gastric pain (hun-

³Such "neutral" stimuli usually belong to *exteroceptive* fields, such as vision, audition, or touch.

ger), olfactory, and temperature complexes are also possible. Complexes may be divided, according as their retroflex basis is one of inhibition or facilitation respectively, into the negative and the positive. Complexes can be based upon more than one primitive retroflex tendency at a time, and when a single stimulus becomes conditional simultaneously to both a positive and negative tendency a process of conflict results. If one tendency wins ascendancy over the other, the latter is "repressed." Many of the Freudian cases involve a repression, in this sense, of a sexual by a pain complex. In other instances pain complexes (fears or phobias) are repressed by positive complexes, such as that of the "ego" (*vide infra*).

It is clear when once a specific, originally neutral, stimulus becomes associated with a retroflex function that this stimulus can act to inhibit or to facilitate—as the case may be—any further form of cortically controlled response with which it may happen at any time to be concurrent. In other words, it can take the place of the primitive nociceptive or beneceptive stimulation in primary retroflex action. Such a process resting upon a conditioning of the fundamental retroflex functions through experience may be called *secondary retroflex action*.

It is obvious that this process of conditioning and reconditioning can go on *ad infinitum* and build up definite constellations of response tendencies in the cortex which have an extremely complicated historical basis. The vast majority of our adult processes of "learning by experience" and the development of new forms of behavior in general do not rest directly upon the stimulation of primitive nociceptive or beneceptive sense channels but rather upon an elaborately conditioned operation of the central functions of which these channels are the normal exciters. The early education of the child, particularly his so-called moral education, has as its real function the production of conditioned retroflex systems which can be employed by society in his later life to control his behavior. One of the most complicated products of this progressive pyramiding of retroflex functions is the so-called "ego complex," which dominates the behavior of practically all contemporary human beings. This complex is not based upon any single nociceptive or beneceptive channel but upon all of them combined in a certain manner with primitively neutral stimuli.

Complexes are usually regarded as abnormal or psychopathic affairs, but if we accept the theory above outlined all human tendencies to action must rest upon complexes in the broadest sense of the

term. We notice a complex only when it is of an unusual kind which incapacitates the individual to some extent for normal life. The majority of complexes, however, are absolutely essential instruments to the proper adjustment of the individual to his natural and social environments. They provide him with the motives which are necessary in order that he should survive individually and that his species should be propagated.

VI

There is a great deal of discussion in current psychology with regard to the part played by *instincts* in the development of human behavior. All psychologists recognize clearly that truly instinctive action is found in certain lower animals, particularly among the invertebrates, but there is considerable question as to whether man possesses instincts in this sense, that is, whether he has any *complicated* forms of adaptive response which are inborn.

The theory above outlined suggests that what we call instincts or instinctive behavior in the human being may actually be complexes or forms of response developed by experience in connection with the retroflex functions. Some of the complexes which are produced by experience follow almost inevitably from the nature of the hereditary retroflex systems and the general characteristics of the human environment, so that these complexes must appear in every normal human individual. This relative invariability would cause them to be mistaken for instincts. It seems to me highly probable that practically all of the so-called instincts of the human being are actually general complexes of this sort.

The above expressed opinion must not be taken to imply a disbelief in the presence of any completely hereditary forms of response in the human animal. There is not the slightest doubt that a great many such forms of response exist, but practically all of them seem to be carried out through synapses in the spinal cord or other nerve centers lower than the cerebrum. None of these hereditary responses, moreover have a sufficient degree of complexity to warrant their classification as instincts, although many of them form *parts* of complicated responses which I conceive to be developed by experience but which are often regarded as instinctive. The cerebral cortex offers only one out of many alternative paths by which afferent nerve energies can pass over into efferent channels. We are certainly compelled to suppose that practically all of the nociceptive and beneceptive nerve

paths discharge not only in a specific way into the cortex but also into specific motor channels *via* synapses of the spinal cord, medulla, or mid-brain. These lower center connections are wholly hereditary and their motor expressions are necessarily implicated in any response system of which the retroflex mechanisms form a part. Thus pain stimulation, for example, normally brings about a general innervation of flexor muscles and of the sympathetic nervous system.

It is very doubtful whether any definite hereditary forms of response are mediated through connections in the cerebral cortex.⁴ The cortex appears to be the organ of flexibility and adaptability in response, and is at its highest level of development in the human species, in which also it appears to dominate with great power all other nerve centers. No doubt the cortex has a definite anatomy which is determined by heredity, but the function of this anatomy appears to be to render possible the greatest variety of interconnections of afferent and efferent nerve paths, without determining which ones among these possible connections shall become effective. It is upon cortical processes alone that we conceive the human introspective consciousness directly to depend.

Shand, McDougall, and others have attempted to correlate *emotions* with instincts, claiming that for every instinct there is a corresponding emotion. Instinctive activities are often divided by such writers into primary and derived forms, which implies a corresponding division of the emotions. According to the present theory, the primary emotions would correspond to primitive unconditioned retroflex functions. All other emotions would be of the derived type. There is still considerable argument among psychologists as to the exact definition of an emotion, but, in spite of the James-Lange theory, affection appears still to be regarded as an essential constituent. Whether a given experience is called an emotion or not seems to depend upon its intensity, and in particular upon its affective intensity. My view would be that any experience accompanying a sufficiently powerful arousal of a retroflex function is an emotion. The majority of emotions in adult experiences depend upon a conditioned arousal of these functions, being associated with specific *complexes*, and are therefore to be classified as derived emotions.

It is a characteristic implication of the present theory that the essential bases of specific emotionalities lie in various afferent, rather

⁴Exception may have to be made for certain oculo-motor adjustments.

than efferent systems. So-called instinctive behavior in man must be studied in relation to a subdivision of receptors rather than of effectors, if progress is to be made.

VII

The above sketch is, of course, too brief to provide an adequate presentation of a theory as comprehensive as the one with which it deals. The sketch provides all the necessary materials, however, for any student of the subject to work out detailed developments of the theory, whether these involve an application to problems of normal or of abnormal psychology. I hope to follow out some of these details myself in further papers dealing with specific problems of the affective life.

THE CONDITIONED REFLEX AND THE FREUDIAN WISH

BY GEORGE HUMPHREY

PERHAPS the most serious ground for misgiving in the psychology of Freud is what seems the entirely anthropomorphical nature of the wish. The wishes appear out of the blue sky of the unconscious, they fight, they compromise, they subject each other to the indignity of suppression, they join hands, they agree to differ. They seem to behave not as the parts of one man but as an army of men, or rather not as an army but as many armies. The picture has of course the merit that it is graphic, and by contrast with the psychology of a generation back that is a welcome quality. But such anthropomorphic entities, however lucid the metaphor they present, are scientifically dangerous, and are usually found to be the product of incomplete thinking, and it is the purpose of this paper to show by means of the conception of the conditioned reflex, that what are apparently entities may be reduced to a much simpler form.

Consider the genesis of the desire I feel for food every day at certain times. Once all that was necessary to satisfy this desire was food alone. It makes little difference to the hungry boy of six whether he eats his pudding on the floor or at the table, out of his nor over clean pocket or from a silver dish. But when he is forty years older he may have become an epicure. His dinner must now be punctual or his appetite is spoiled. The cloth must be clean, the lighting subdued, the service expertly deft, the table properly set with all the accessories of food well cooked and eaten in a seemly manner. There is a great difference between the eating of the little boy sitting on the kitchen floor and that of the epicure whose appetite is spoiled if he happens to have been given someone's else napkin. And yet a clean napkin is not part of the food. Why then must there be all these frillings to a meal in addition to a sufficient quantity of well cooked food? Because, to use a hard worked term in psychology, they have become associated with food. They have been present for years on previous occasions when the food and the cooking were good, simultaneity being, as Aristotle observed, the essential factor for association. Moreover they now serve as a stimulus for food and in place of it. When the bell has rung for dinner and the process is

gone through of sitting at the table with the lights duly shaded, the knives and forks and other accompaniments of food properly arranged and the napkin smoothed down in its right place, the mouth waters. The reaction to food has begun without the sight of food, by means of these other things that serve as conditioned stimuli for the food reaction. In other words, the wish for a meal consists of the hunger motive put into operation by the mechanism of the conditioned reflex, or rather of a number of conditioned reflexes.

Pavlov has shown that almost any stimulus occurring at the same time as the primary stimulus will thus condition the reaction of that stimulus, and in another connection that not only are the salivary glands excited but that in addition the gastric juices begin to flow. Thus the whole complex process of digestion is actually initiated by these stimuli which originally were incidental, and without meaning, and although in actual life instead of fairly simple secondary stimuli such as colored lights and musical notes we have a highly complicated system of extra stimuli, yet the principle is the same. The whole process which we call digestion is set on foot by the action of a number of stimuli originally extraneous, the wish to eat now becoming the wish to eat "like a Christian," that is, to eat with all the secondary stimuli. In the same way other wishes can be analysed into reflexes, and in general it may be stated that the wish, as Freud uses the term, is a course of action for which the organism is set (Holt) by means of a system of conditioned reflexes.

A system such as we have described requires, as we have seen, a very complex system of stimuli to set it off. Sometimes it happens that while some of the necessary stimuli are present others are missing. In this case some of the reflexes will remain unstimulated, and the system will be in part excited and will remain in part unexcited. The dinner gong may ring, the guests come in and take their places but the soup may not appear. Worse, the soup may appear but the dinner may not be able to start because someone is called away. It is then that the diners would say that they began to wish for their dinners. When a system is partially excited we have a wish in the non Freudian sense of the term. A strain is set up, and the whole system is thrown out of equilibrium. Nothing can now put things right but the proper stimuli, and after the delay even these may not be sufficient. The dinner may be entirely spoiled by a late arrival. The purest example seems to be the process to which Krasnogorski has given the name "loading and discharge." Here we have a stim-

ulus A and a stimulus B both of which are necessary to set off the reaction. The two stimuli are separated by a three minute interval. If now the stimulus A is given and is not followed by B, there is no apparent response. Yet something must have happened within the organism, for this apparently responseless stimulation is a necessary condition for stimulus B to be followed by the adequate reaction. There has been partial or inadequate stimulation. It is to be emphasized that in adopting the term "loading and discharge" nothing is implied as to the nature of the process; the physiological controversy hardly concerns us here.

Such partial excitation occurs in many of the pathological cases and is a fruitful cause of pathological conditions. For example, in the case cited by Doctor Kempf, where the daughter-in-law vomited at the sight of red fruit, the vomiting occurred not from the pure stimulus of the sight of red cherries but because the stimulus was part of a nexus of stimuli. The sight of red cherries brought partial excitation. Similarly in a case described by Healy where a boy was shown indecent pictures by a friend and began to imitate the bad habits of the latter, the potency of the photographs and the influence of the friend depend on the fact that a whole system of reflexes has been thrown out of equilibrium. The same thing happens in many advertisements and in all suggestive pictures, the art of which is to present such a stimulus as will set in a state of unrest a powerful system, thus exciting a wish in the non-technical sense. But not all cases of pathological seriousness are to be set down to this cause. For instance, Burnham gives an example of a girl who developed hysterical fright from a dog that jumped at her, first the place serving as a stimulus for the original reaction, then reminder of the place by teasing, then the presence of the persons who had teased her. Here, for the dog as stimulus is substituted the kennel, for the kennel the mention of the kennel, etc. There is complete excitation, one of the stimuli in this case, as sometimes happens, being sufficient. Indeed it is the completeness of the excitation that makes the case pathological. For the normal reaction would have been a partial excitation, bringing a state of mild tension. In a healthy organism this would have been endured and gradually eradicated by counter experiences, as the experiments of Pavlov and others have shown to occur in the unlearning of conditioned reflexes. Partial excitation of this relatively trivial type occurs every moment of our lives. A stress is always engendered, but whether or not the stress will cause a disturbance so important

as to be considered pathological depends on the nature and strength of the system involved and the robustness of the organism.

There is one type of pathological case, however, that is always caused by the mechanism we have described, and that is the case usually described under the name of conflict. Here there are said to be two opposing wishes which line up one against the other and fight a bitter battle until one is vanquished. Sometimes one is able to reduce the other to a state of relative impotence without however being able to destroy it altogether. Then there is victory without peace, the organism which is unfortunate enough to be the seat of the warfare being torn in two directions by the victorious trend on the one hand and the counter efforts of the defeated wish on the other. A doctrine as picturesque as this should immediately be reexamined.

Suppose I pass a baker's stall when I am hungry and see a well baked biscuit just to my hand. I am tempted to take it, but do not do so because of certain social inhibitions concerning other people's goods. Here we have the essentials of a conflict. There is the wish for food, which says take it. There is the commandment which says thou shalt not steal. Between the two, if I am hungry enough, results a struggle, according to the usual account, which tears the organism in two different directions and subjects it to very serious discomfort. But consider what has happened. The system of reflexes which constitutes the digestive process has been partially excited by the stimulus of the sight of the food. Full excitation can only be brought about by a succession of stimuli which would mean taking up the food, biting it, letting it remain in the stomach, etc. Inhibition has cut this chain of stimuli short. It has prevented the taking of the food into the mouth, although the first stimulus, the sight of the food, has been given. The pain which the man experiences comes from the fact that a system¹ of reflexes of enormous strength has been partially stimulated. That this is so, and that the pain does not come from the fact that there is an internal struggle, is neatly shown by the fact that the situation and the pain that go with it may be produced by the partial excitation alone without the struggle. In the *Odyssey*, Book XI, lines 582 to 592, is told the story of Tantalus "in grievous agony," who, it will be remembered, was put in a lake over which hung grapes, both the water and the fruit disappearing whenever the old man tried to get at them. Here is the pain without the conflict, and the

¹Or to be more precise, two systems. A "conflict" is generally due to double partial excitation.

general situation is so common that there has been invented the word tantalize to designate such partial excitation which is not caused by inhibition. If now the grapes had belonged to someone else and Tantalus had had qualms of conscience about eating them, there would have been a so called conflict, but the pain would have been caused not by the struggle but by the partially excited chain, or possibly chains, of reflexes. Further, the human being is so constituted that it likes to imagine that all hindrance comes from within in the form of inhibition. If Tantalus had been a little less hungry he would have said that the grapes were sour. The pain of what is called a conflict, then, is internal to one or both of the systems involved, not external to them both. It is not the fact that there is inhibition that causes the discomfort, but the fact that a powerful system has been partly but not adequately excited. There is no evidence that mere inhibition does psychical harm, any more than, according to Sherrington, it does physical harm.

Summing up: by simultaneous concurrence there are set up systems of interconnected conditioned reflexes, the reaction to the combined stimuli of which constitutes the Freudian wish. The constituent reflexes come to condition each other as well as the joint reaction, and so, when some are excited and others not, the whole mass is thrown into a condition of stress, the effect of which on the organism depends upon the nature and driving force of the system disturbed. Thus is born the wish as the ordinary man understands it, which is a mild form of conflict, the discomfort of which in the pathological cases as well as in the milder form is due to the partial excitation of a system of reflexes.

TREMOR FOLLOWING EXPLOSIONS

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THE diagnosis of the functional disturbance known as Tremor which so frequently follows proximity to explosion is one which presents several problems for solution. Is this Tremor of hysterical, emotional, organic or neuropathic origin? Can it be simulated? What treatment ought to be employed? and, how ought one to deal with Tremor-stricken soldiers?

Without supplying a decisive answer to any of these questions Henry Meige in the following history of a patient so afflicted gives several indications destined to facilitate the clinical analysis of this disturbance, and incidentally certain military judgments.

On the 13th January, 1915, Corporal S. and his men were occupying a trench when the bursting of a torpedo above him threw him violently against the wall without wounding him, although several of his comrades were killed. It is not certain that he lost consciousness; he remained felled to earth until an adjacent communication trench was sufficiently completed to admit of evacuation. He had begun to tremble a short while after the explosion. Back in the trench he still trembled. In spite of this he remained there for a fortnight trembling all the time. He lost appetite, became thin, and could no longer handle a rifle. He was not evacuated for a month. Then, as his condition did not improve, he was sent to various institutions, until the 13th April 15 found him in the Neurological Centre at Villiers-Cotterets where he remained for two months.

There he was examined by Guillain who supplied the following information. This man's complaint had been diagnosed as "Hysterical chorea." He trembled in every portion of his body. The patellar and achilles reflexes were active, those of the upper limbs were normal, and there was no disturbance of sensibility. There was neither tachycardia nor bradycardia—only a state of emotion so keen that it accentuated the tremor. This became particularly violent at the sound of cannon, or the bursting of bombs in the neighborhood. No improvement was recorded during his stay at Villaret-Cotterets. Lumbar puncture revealed a normal cerebro-spinal fluid without hypertension, non-hyperalbuminous, and devoid of cell. On the 19th

June 15, he entered the Salpêtrière. A month later he was sent to a civilian hospital, where he stayed until the 24th September, from whence he went home on convalescent leave for a month. He returned to the Salpêtrière on the 15th December, 1915. During the whole of this time, his condition had not altered in the least from what it became after the explosion which caused the mischief—a year previously. He trembled continuously.

This tremor, apart from any casual emotion, was visible in the four limbs, with a slight accentuation in the upper-right limb, and the lower left. It used to cease during sleep, although it continued in the recumbent position just as in that of sitting or standing. Toward evening it became more marked, and the patient only managed to get to sleep very late. The head trembled only slightly. There was a slight and irregular twitching of the eyelids and tongue which did not synchronise with the tremor of the limbs. There was no nystagmus. In order to lessen the trembling of the upper members, the patient used to hold his forearms at right angles to his arms, firmly against his sides. When the trembling of the lower limbs became very powerful, he used to get up and walk about. Any movement, such as seizing an object, carrying a spoon or glass to the mouth, used to exaggerate the disturbance. It then recalled the intentional tremor of the insular sclerosis in its most intensified form.

But the principal cause of the exacerbation was emotion. A sudden noise, a sharp command, the mention of a stay in the trenches would bring about a veritable motor crisis. The patient's body would jerk in the most marked manner, and his legs would tremble so as to almost cause loss of equilibrium; then this excessive agitation would gradually die down, although the original tremor would remain. The search for the reflexes was a difficult matter because the slightest percussion would cause the most violent jerking. There were no disturbances of sensibility, and perspiration was easy and abundant. The pulse varied according to the degree of the tremor. In repose it would be 60, while a sudden rap on a table would bring it up to 120."

In order to find out how to deal with such a case, it is necessary to analyse successively the trembling proper and the paroxysms which occur on certain occasions.

These tremblings used to be classed as belonging to a classical type already nosologically recorded with the utmost precision, and it is true that these types are observed clinically, although the hybrid

or atypic forms are less numerous. The Parkinsonian type is one of the most characteristic because of the regularity and the synchronism of the oscillations in all the segments and especially their predominance in the extremities, particularly the fingers.

Certain Tremor-stricken soldiers present this type, and the observation of agitated paralyses dates further back than yesterday, several cases having been noticed at the Siege of Strasbourg in 1870. The etiological features of this present day tremor favour the idea that its symptoms are identical with those of Parkinson's disease. The latter syndrome is regarded to-day as the manifestation of an organic lesion. If the situation and nature of the lesion are still uncertain, yet their striking analogy to these pseudo-bulbar and lacunar disease admits of the possibility of lesions in the vicinity of the central gray nucleus.

It is perfectly admissible that the shock and concussion caused by violent explosion can produce more or less lasting disturbances in the same region of the encephalon, acting either directly upon the nervous centres and tracts, or indirectly by means of the vessels or ventricular liquid. This is why a Parkinsonian tremor following upon shell-burst points to the possibility of an organic lesion. The case just described, does not favour this idea, but examination of the cerebro-spinal fluid did not take place until three months after the accident. Nevertheless the symptoms of this case differ appreciably from those of Parkinsonian Tremor; there is neither regularity nor synchronism in the oscillations—the characteristic trembling of the fingers particularly being absent. Finally whilst the Parkinsonian illness is a progressive affection, where the Tremor gradually invades all of the members, in this case, as in the majority, the condition of the patient undergoes no change. The lesion, if lesion there be, remains as it was in the beginning.

This remark is important both as a prognostic and as a guide to military decisions. Moreover, it is evident that in the patient under discussion, the tremor is of the type known as "intentional." The disturbance is accentuated by any spontaneous movement, while it becomes excessive if, for example, the patient is asked to convey a half-full glass to his mouth, a fact which is no doubt explained by his fear of failing to accomplish the act safely. In this respect the Tremor can be compared to that occurring in multiple sclerosis, but there is no other clinical sign which bears out this resemblance. As far as the rest is concerned, Meig does not consider that the "in-

tentional" nature of the Tremor is a very safe guide to diagnosis. More often than not, it is a mere manifestation of the patient's inability to overcome his fear of failure of accomplishment. Thus, in such a case, the Tremor is nothing more or less than a reaction of emotional origin, which often plays an important part also in subjects with multiple sclerosis also in the majority of other Tremblers.

This exaggerated oscillation upon attempted movement is also found in the Tremor which accompanies organic affections. It is present in the disease of Freidreich, in lesions of the cerebellar apparatus (acute Tremor of Reginald Miller). In all cases of tremulous neurosis, hysterical Tremor and Tremor of Degenerates, etc.). This sign is well worthy of being noted, although too deep a significance must not be attached to it. The same is true of the frequency and extent of the oscillations; these vary according to the patient and the occasion which calls them forth. On the contrary, their regularity is more important and speaks in favour of an organic origin. It was noticed a long time ago that neuropathic tremblings, and notably those accompanying hysteria were essentially polymorphous. At this juncture, it is well to point out the abuse which is made of the term "Hysterical Tremor" to label Tremors the nature of which is unknown. It is very doubtful whether Tremor is one of the charactes of hysteria, although it is possible that in certain subjects it may have been evoked by suggestion. One thing is certain however, viz., that in the vast majority of cases Tremor resists any and all Psychotherapeutic tentatives. Even the best-directed will fails to overcome it; if ever a short respite is gained, it never lasts long enough to lead us to anticipate material modification. Such was the case of the soldier under observation; hysteria was not at the bottom of his trouble. "Let us limit our statements," says Meige, in concluding his remarks, to saying that this man's trouble was not a case of Parkinson's tremor, nor yet of cerebellar commotion, that he presented no sign of multiple sclerosis, nor of general paralysis, Grave's disease, nor of intoxication reputed to be tre-ogenic, saturnine, mercurial, ethylic, opotherapic, etc., and let us add that neither heredity nor congenital deficiency, nor, in view of his age, senility, played any part therein.

Thus, although the character of this Tremor resembles those considered as neuropathic manifestations commonly observed in traumatic neurosis; nevertheless, given its etiology, tenacity and immutability it is not impossible that it is the consequence of some material deterioration of the nervous system caused by a violent explosion.

What is the explanation of the paroxysms which, in the case of this soldier, sometimes take place? They are evidently emotional reactions, and it is no longer a question of a mere trembling, but of jerking. A sudden noise, a surprise, an unexpected order, a painful memory of incidents of the war, all serve to bring about this phenomenon. It is a sudden movement of the whole body manifested more or less intensely on any of these occasions, varying according to the impressionability of the patient. In some subjects it is merely a sudden jump; in more emotional natures the first jump is followed by a series which gradually decrease; this is the jerking movement, or, as Littré aptly describes it—"The sudden agitation of a person profoundly moved."

The analysis of this jerking phenomenon is interesting, and it must be distinguished from Tremor.

The elementary motor reaction which produces it is due to a sudden contraction of nearly all the flexor muscles. The arms stick to the sides of the body, the forearms fold back on the arms, the fingers close, the thighs and legs close up together. The trunk curves forward except in a few exceptional cases; the shoulders are raised and the head lowered. The facial muscles also share in the general contraction; the eyelids close, the teeth and lips shut firmly. In short, the individual replies to an emotional shock by a general defensive reflex movement by which the body seems to shrink into itself. This phenomenon of retraction is found in all grades of living creatures—beginning with the amoeba—when threatened by sudden danger. It is followed by a more or less sudden and complete relaxation. Sometimes it is repeated several times in succession with growing intensity, followed by diminution. Such is the jerking phenomenon. This is exactly what is observed in this soldier, but in his case, the motor phenomenon is excessive and repeated a great many times, assuming the aspect of a general convulsive crisis which subsides only very slowly. When seated or lying down the emotive reaction has all the characteristics described under the name of jerking. When standing, the jerking of his lower limbs threatens his equilibrium. He then has the appearance of one suffering from that form of *astasia*—*abasia* or *pseudo-chorea* incorporated under the name of *hysteria*. After the jerking crisis, he gradually calms down. There remains only the Tremor, which is unceasing.

Gilbert Ballet has stated that certain tremors can be considered as "Mimicry of fear." This idea is quite correct as re-

gards the emotive paroxysms of our patient. They can be considered as the echoes of the initial emotion which he felt at the explosion of the torpedo,—emotion aggravated by commotion—and followed by the agonising wait at the foot of a mine trench surrounded by dead or wounded, for aid which was merely problematical. In the course of these paroxysms it was noticeable that his expression was undoubtedly that of terror. But if this explanation is admissible for the jerkings, it is not certain that it accounts for the perpetual tremor which by its existence and tenacity points to a durable and permanent perturbation of the neuromotor apparatus. It is not less true that a large number of cases of Tremor are, like the jerking phase, of emotional origin. Trembling itself is one of the common manifestations of emotion, very varied however, in intensity and localisation. It may affect the hands only, or the jaw, thereby causing the teeth to chatter. When the lower members are affected, the knees knock together. Sometimes it merely takes the form of very rapid and feeble shaking, and other times it develops into a veritable convulsive crisis. But whatever be its form, this post-emotional motor reaction is transitory; it generally disappears more or less quickly as soon as the first shock wears off.

When a tremor of emotive origin becomes settled and lasts for months or even years in the absence of ascertainable hysteria, it is difficult not to ascribe it to the existence of an organic disturbance. The emotive shock may suffice to produce this, a fortiori if there is added to the emotion a commotion accompanied by a sudden change of pressure as is the case in the explosion of large projectiles. (See Tom A. Williams *Differentia of Phobias and Obsessions*, Internat. Clinic, 1919, Vol. IV, where after years' duration, these are made to disappear in a week or so.)

The emotive nature of a tremor is confirmed first by its origin, then by the influence of emotional shock, which is capable of provoking it anew or of exaggerating it. Finally, one ought to seek for the signs of emotional constitution, the value of which Dupre has demonstrated, viz., hyper-reflectivity, tachycardia, sudden vaso-motor and secretory exaggerations. The majority of these signs were present in this soldier. But, in this case it cannot be proved that they did not exist before the accident. Neither is it impossible that the emotive syndrome was created totally by a violent emotion.

In analysing a case of Tremor, a mental examination is also necessary. In the case of our soldier, the man was quite aware of

his Tremor and its exacerbations caused him intense sorrow and humiliation. He was wretched at not being able to control the movement of his limbs. He suffered greatly on account of this powerlessness and particularly at seeing himself ridiculed by some of his companions, who took a malicious delight in bringing on these paroxysms. Therefore he lived in a solitary fashion, seeking only to efface himself. Dread of provoking his Tremor became with him a veritable obsession, in the psychiatric sense of the word. And it is true that if this Tremor had all the appearance of the shaking of fright, it is equally certain that this man was afraid of his tremor and its jerking phase. He presents, therefore, all the symptoms of the psychopathic state which Henry Meige described some years ago as Tremophobia, of which a brief description is as follows:

"This variety of phobia is not rare in subjects who are troubled with trembling of the head or limbs. Tremophobia participates in all the characteristics of obsession, resembling particularly the Ereuthophobia (fear of blushing) of Pitres et Régis. One sees it especially in persons of emotive constitution, and who thus have a predisposition to it. The physical phenomenon engenders the obsession which, in turn, amplifies the emotive reaction, while the exaggeration of the latter reacts similarly on the mental disturbance. There is thus created a vicious circle of reciprocal psycho-physical reactions, which ends in an evil state of obsession. Tremophobia can begin with a genuine tremor, one so-called constitutional, hereditary, neuropathic, senile or any other variety allied to a tremogenetic affection, or like Parkinson's disease, multiple sclerosis, Grave's disease, etc. The fear of trembling is also linked with ideas of humiliation, of loss of prestige, nosophobic anxieties, etc. In short, Tremor, be the cause what it may, can become, in subjects predisposed thereto, the beginning of an obsessive psychopathic state, that of Tremophobia. This description is applicable to the patient under observation. He is not only a trembler, a jerker, he is—to use a neologism—a 'Tremophobite.' "

Cases of this type are numerous at the present day. The following is a second example:

B——— was evacuated from the Front because of Tremor following upon prolonged bombardment. He was an artist, who for long months had cheerfully borne the hard life of the trenches, but there came a day when, after a particularly heavy firing, "the machine got out of order" to use his own expression. He began to tremble. The Tremor persisted, being particularly visible in the

head and upper members, especially the head, which vibrated laterally in varying degrees of intensity. The patient tried to master it by stiffening the muscles of the neck, but only with partial success. The trembling of the hands also was comparatively slight, not being greatly exaggerated by movement, capable of partial control by powerful contraction. On the whole, this man seemed to be in a state of controlled vibration. This bears some analogy to Parkinson's disease, but only superficially. Any doubt as to the emotional nature of this Tremor is dispelled by the co-existence of emotional, circulatory and endocrine reactions, and finally by a psychopathic state which the patient himself analysed exactly, as may be seen from the following:

"For nearly four months, ever since I was evacuated from the Front, my nervous state, which I thought would last barely a fortnight, still persists, although slightly ameliorated. There is no doubt that I am calmer. My heart does not beat as it used to do, neither do my hands perspire so profusely upon the occasion of the slightest emotion or effort. At first, the slightest shock would make me tremble uncontrollably. I can master the Tremor for a few minutes, but no longer. The noise of the doors of the Metropolitan, a wavering light, the whistle of a locomotive, the yapping of a dog, a childish peevishness, all have the effect of arresting the Tremor. The theatre, music, the reading of poetry, a religious ceremony—have exactly the same effect. I went lately to see a flag placed in the Invalides, and before the moving spectacle, I fancied myself cured. Then all of a sudden, I began to tremble, and to such an extent that I was obliged to sit on the ground and cry like a child. Sometimes the tremor came on suddenly without cause. For instance, I went to a shop with my wife to do some shopping. The crowd, the lights, the rustling of silks, the colors of materials were all a delightful contrast to our life of misery in the trenches. I chattered and was as happy as a schoolboy on holiday. Then, suddenly, without any reason, I felt my strength going. I stopped talking, I had a pain in my back, I felt my cheeks become drawn, my gaze became fixed, and the Tremor returned, and with it a feeling of great physical discomfort. At such times, if I can lean up against something, sit down, or especially lie on my back, the tremor diminishes or even stops pretty quickly. . . . I feel uncomfortable under three circumstances—upon waking after ten to eleven hours sleep; then after meals, especially good ones. Finally and above all, under the electric douche. There, as if by magic, my ideas become clear, happy and powerful. I

feel myself again. This lasts for an hour or so, and then I fall back to my former unhappy condition."

A very good description of Emotional Tremor.

This is where the Tremophobia comes in:

On a tram, or in the Metro, I feel that people are looking at me, and it makes me miserable. I know that my state inspires pity. One good woman offered me her place. I was touched to the bottom of my heart. But when they look at me and say nothing, what are they thinking? This uncertainty causes me a good deal of suffering. If only I can talk, I don't feel it so much, because they can see then that in spite of my trembling I am not a poltroon. What a sad state to be in.

There is no doubt that Tremor of this type is accompanied by an amount of moral suffering which it would be unjust to ignore.

A final question arises. What is to be done in a case like this? According to Meige medicamentary means have little hold on tremor whatever their nature may be. The only medicaments which have a sedative effect, and that only a short one, such as hyoscamine, hyocine, duboisine scopolamine, etc., ought to be used with the utmost caution. In one case static electricity produced a very happy result, but this is not invariable. Finally, from a military point of view, the following seems to be the best method to adopt:

First—A period of observation—of the characteristics and evolution of the Tremor. If the latter does not abate, grant leave of convalescence for one or two months. Then a fresh period of observation lasting for about a month, *under the same doctor*. After that, if the Tremor persists with the same characteristics, temporary discharge should be granted. When the man is called up for re-examination it is desirable that the Doctor who previously attended to him be called upon to give his opinion. We can do much better than this (see loc cit "Phobies.")

In concluding his article, Henry Meige makes the following remarks regarding the medico-legal decision to be made with reference to Tremophobia:

"When it is a question of Tremor following upon traumatisms, notably in cases of industrial accidents, one must beware of simulation. In the second place, an appreciation of the motor disturbance must be arrived at in order to know where Tremor ends and Tremophobia begins. In cases of Tremor following upon accident, it is not unusual to find that the subject, in the course of medico-legal examinations has

cultivated voluntarily and consciously a manifestation of the effect with a definite end in view, and at other times it may be a return of the malady to which Brissaud gives the name of *sinistrosis*. But in other patients, Tremophobia and psychopathic disturbances may also serve to exaggerate the Tremor. The Doctor-Judge ought to know this."

As to the evolution of the incapacity which results from Tremor, this varies considerably in accordance with the intensity and the localization of the motor disturbance, and whether it is influenced or not by movements adapted towards the fulfilment of a definite end, by emotional shock and finally according to the patient's profession. If it appears impossible to fix in advance a percentage of invalidism, it will be necessary to devote to Tremor, chapters in greater detail than these which appear in the currently-consulted military hand-books, in order to arrive at a correct appreciation of the remaining physical aptitude, or for the necessity of preparing the papers of discharge. (See Treatment of Military Hysteria, *Military Surgeon*, Nov. 1919; also Emotion in Warfare, *Jour. of Abnormal Psychology*, 1919.)

PHYSIOLOGICAL FACTORS IN TREMOR

I. A type of Functional Tremor of somatic origin is that provided by the injection of adrenalin. It is a question whether this has any relation to a possible modification of muscular tonus by the influence of adrenalin upon the sympathetic fibres which now we know do enter the muscles, perhaps destined for the sarcofibrils. On the other hand, the phenomenon may be a chemical one due to the oxidase which some experimentalists believe to be an important constituent of adrenalin.

II. To be compared with this tremor is the coarse intension tremor of insular sclerosis, the physiological basis of which is regarded as an absence of proper insulation due to the destruction of the white substance of Schwann, whereby the nerve impulses are rendered irregular. This interpretation is particularly favored by those who believe in the identity of nerve energy with electric energy. The Tremors seen in alcoholic neuritis are the more explicable in a similar fashion, namely, that the alcohol has modified the lipoid material of the white sheath so that it ceases to insulate adequately. The extreme of this condition is seen in the anatomical appearance of alcoholic neuritis, in which the white sheath has first broken down into droplets and eventually disappears.

III. A different set of considerations must be borne in mind, however, in relation to the influence of the cerebellum upon tonus, which leads to the jerky movements, the disorder of which function produces dysergia. This disorder should be opposed to that derived from disturbances of the cerebrum, for the function regulated by the cerebrum is not regarded as that of tonus which is controlled by the sarcoplasm, but is believed to be the clonic function which permits of rapid intentional movements and is regulated by the myofibrils.

An analysis of these respective elements is necessary if one is to correctly envisage any case of tremor other than one of psychogenetic type. (See forthcoming Book on Disorders of Nervous System in Warfare.)

THE TREATMENT OF TREMOR

In several French and at least one British clinic, attention to the practical aspects of chronic tremor has been stimulated by the questionnaire which was sent by me in November, 1917. In one of these centres, the study of the question has led to the conclusion that the vast proportion of cases show that a Tremor is in reality within the patient's control if a sufficiently powerful stimulus is brought to bear upon him. To this generalization there are only two exceptions, namely those Tremors due to organic disease of the nervous system which is characterized by very distinct and unmistakeable signs, and secondly those Tremors of emotional provokatis, which show themselves as very fine oscillations. These are in all probability due, not to the emotion itself, for in acute emotional conditions the Tremor is of a much coarser kind. They are probably, therefore, in reality of chemical mechanism, being of the same type as those seen in toxic conditions. They do not differ in any way from those exhibited in Grave's disease. They are accompanied by tachycardia, flushings, hyperhydrosis, insomnia, restlessness, over-excitability, emotionalism and even progressive emaciation, and these patients are indistinguishable from the mild cases of hyperthyroidism which are seen so frequently by *those who look for them* in civil practice.

Hesitation regarding the pathogenesis of tremor in many cases which do not possess the usual characters of organicity nor of toxicity, has been largely due to the fact that there has been failure in them of the treatment which succeeded in cases which seem similar. This argument, however, is not valid, for there has not been taken into

account the variations of individual resistance to psychotherapeutic interventions, and that the simple slight and often half-hearted intervention of suggestion, persuasion, reinforcement by electric apparatus, the example of the cure of other patients which is sufficient in the majority of cases may be quite insufficient against the more resistant type of person. Reflection upon this issue, the result of my questionnaire, led the chief of one Neurological Centre to recall several patients whose Tremor he had concluded was organic because he had failed to cure them. Reconsideration of the matter led him to believe that the Tremors in question must be purely functional and their regulation within the patient's power. He accordingly retreated those patients much more intensely, pushing the appeal to the utmost, and in all cases ultimately succeeded in causing the complete disappearance of the Tremors, which was a complete proof of their non-organic nature. One of these cases was particularly instructive; for the man had received a wound in the left parietal region which apparently was the cause of a clonic tremor of the right arm, which persisted even in sleep. Further there was a history of Jacksonian attacks. This man had been discharged from the army under the belief that his condition was due to the wound in the head. A colleague, however, insisted that there were no organic signs whatever, and that the Tremor furthermore seemed to him such as might be reproduced intentionally. The patient's power of inhibition was very strongly stimulated by means of very powerful faradism which he knew would be prolonged for several hours unless recovery occurred as had been the case with other patients. The result was that after an ineffectual struggle he began to control the Tremor, which completely and permanently ceased at the same sitting.

The *principle of treatment* depends upon the fact that when intentional and purposive movements are made by such patients under strong stress, there is always a tendency to cease trembling. It is a reaction similar to that which occurs in paralysis agitans, in which the trembling usually ceases when co-ordinate movements are made.

METHOD OF TREATMENT

Movements are compelled by means of a desire to avoid the painful stimulus of the faradic current. The physician orders a movement, such as that of lifting the leg, places behind the limb two electrodes held in his hand. The tremulous oscillations of the pa-

tient cause his limb to touch the electrodes from time to time, which is exceedingly painful. As a result, he can scarcely help steadying his movements. By means of a series of back and forth movements directed by means of the electrodes the Tremor entirely ceases. When this occurs, the patient is ordered to make movements unassisted. The mere threats of the proximity of the electrodes usually suffices to prevent further tremor. The patient thus exposed in his pretension that he could not avoid the Tremor, knowing that the Doctor knows that he can do so, and convinced himself that if he does not stop the Tremor further pain will be inflicted, does his best to cease trembling, and invariably succeeds, as now the motive to stop the trembling is greater than formerly was the motive to tremble. The psychical process is not really different in principle whether the patient is an active simulator or whether he really believed that he could not cease trembling.

Thus it can safely be said that if there is no local exaggeration of the reflexes, no rigidity of the muscle of the lead pipe type, no signs of disturbance of cerebellar innervation, that any Tremor in which the movements are more than vibratory in extent, is psychogenetic, and is susceptible of and can be made to disappear when the proper means are used. It is also safe to affirm that a tremor which is merely vibratory is not psychogenetic, and is in all probability due to chemical modifications acting upon the nervous system, and therefore demands medical treatment as well as psychological. (For diagnostic data see Tom A. Williams, *N. Y. Med. Jour.*, March 6th, 1920.)

THE DUTY OF THE PSYCHOPATHOLOGIST TO THE MAN ON THE STREET

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WHAT the man on the street has in his mind concerning the varying concepts of abnormal psychology will no doubt always remain more or less of a mystery. Indeed, it is considered doubtful by some if any concern should be shown toward the attitudes, opinions, and working hypotheses of the lay mind. When, however, the topics are as intimately connected with the everyday activities of one as are dreams, suggestibility, memories, and, in view of the present craze and free publicity of even so-called occult phenomena there is considerable justification for an effort to probe into the opinions of the man on the street and attempt to ascertain the level of the common sense concepts that are held by him. Such information is especially of value to one interested in the application of the more firmly established principles of abnormal psychology to mental welfare.

Accordingly it was attempted by the writer to get below the mental surface of the man on the street to some degree and in a fairly accurate manner find what his common sense knowledge is with reference to the cardinal conceptions of abnormal psychology.

The most important texts designed for use in college classes or for the general reader on the subject of abnormal psychology were carefully examined and the topics which seemed to be most emphasized and of most value culled from each book. These topics were then further selected by eliminating those that were to a certain extent quibbles of different writers or schools and only those retained that would lend themselves readily to be incorporated into a questionnaire that the average individual might intelligently comprehend. In order to stimulate interest and to make what was wanted easily understood it was necessary to use concrete examples and situations in the questioning rather than the more abstract formulations that are found in texts. These considerations made it impossible to probe deeply into any one concept and forced the elimination of some which, fortunately are not of marked value outside of professional uses. This may ac-

count to some degree for what may be considered by some the somewhat random and unsystematic selection of topics.

The question of the method of distributing the blanks was solved by using insurance solicitors to distribute the blanks to their clients and solicit the return of the completed form. This method brought surprisingly high returns and made possible an unbiased sampling of cases. The blanks, on the whole, were carefully and intelligently completed, a not inconsiderable number of the recipients thinking the questionnaire had something to do with their acceptance as a risk.

There are a few over 100 forms distributed and returned but only the first 100 to be returned are incorporated into this report. This makes most of the figures given percentages. The group was composed entirely of males ranging in age from 17 to 56 years. The distribution of the age groups by decades is:

Decade	Number
11-20.....	2
21-30.....	40
31-40.....	31
41-50.....	24
51-60.....	3

Only three of the group had attended college and but one of these was a college graduate (attorney). The following is the distribution by education:

Education	Number
Common school (unfinished).....	28
Common school (finished).....	48
High school (unfinished).....	16
High school (finished).....	5
College (unfinished).....	2
College (finished).....	1

There was a wide range of trades and occupations represented by the group. In all things the 100 men may be taken as fairly representing a typical section of the average adult male population.

The subject of dreams made the most interesting and easy approach and began the questionnaire. All of the group stated that they dream more or less frequently. There were 63 who thought there were people who do not dream. Asked regarding the causes of dreams 72 frankly admitted they did not have any idea. The causes given by the remaining 28 may be listed as:

Cause	Frequency Given
Kind or amount of food.....	15
Worry, conscience, etc.....	12
"Disturbed sleep"	1

It is noteworthy that on not one of the blanks were two possible causes listed.

There were 59 who thought dreams sometimes prophesy events that are to take place in the future. This is indeed surprising that over half of this group of able-bodied and otherwise sound men should believe in even the occasional prophetic import of the dream life. To the question which aimed to find out whether or not any of the group were in any way acquainted with the wish-fulfilling aspects of dreams no relevant replies were given. Only thirty-four attempted replies on this question and all of these were scarcely refined guesses. This may be due in part to the form of the question, which, in order not to suggest the reply was very difficult to construct in a desirable manner. One who is at all familiar with this aspect of the dream life, however, can at once understand the purport of the question as it was formulated so it may safely be inferred that this view of dreams is foreign to the concept of the dream held by this group.

The subject of hypnosis was next in order. Demonstrations of hypnosis had been seen by 31 of the group. These exhibitions had taken place in the theatre. Only one had ever been a subject and that was an unsuccessful attempt by a physician. There were 64 who, while 13 frankly stated they thought it all a fake, did not place any belief in the validity of the phenomena. It should be noted in passing that of the 31 who had witnessed an exhibition of hypnosis 8 considered it a fake (this term was used spontaneously and was in no wise suggested by the wording of the question) and but 6 expressed confidence in the possibility of there really being a bona fide hypnotic condition. There were 36 who believed in hypnosis. Of this number 14 thought the hypnotist possessed some extraordinary power but were unable to specify what this power was except one who simply stated, "personality;" to the remainder it remained something uncanny. Eight of those who believed in the possibility of hypnosis thought not everybody could be placed in that state and 5 specified "weak will" or an equivalent expression as an essential characteristic of a good subject.

Using the illustration Angell gives of post hypnotic phenomena¹

¹Angell, J. R., "Chapters from Modern Psychology," p. 131.

and asking if they thought such a thing could really happen, 2 of the 36 thought it could and 2 of the 36 thought it might, but if it did it would be a sign of mental weakness. The remainder entertained serious doubts regarding the possibility of such an occurrence.

An hypnotical case of multiple personality much similar to that given by Angell² was given and the degree of belief in the possibility of such a case actually occurring was asked.

20 gave no reply.

49 thought it impossible.

12 thought it rarely possible.

19 thought it possible.

One of the group had been in actual contact with a case of multiple personality at one time and was interested in reading about such cases.

The question regarding the subconscious was the most difficult to devise. The question as it was finally adopted did severe violence to several aspects that are very tenderly regarded by those who have a scientific concept of this phase of abnormal psychology but it was necessary in order that those to whom it was addressed would not confuse it with simple memory and would understand more clearly the aim of the question. The answer to this question was either yes or no. There were 12 who replied in the affirmative and who had a more or less vague concept of the subconscious. The reason they believed there was such a thing as the subconscious was because 2 had read about such a thing and the remaining 10 retrospected and applied the question to their past experience citing the instance that led them to believe in the existence of the subconscious. It must be admitted that most of this evidence was decidedly unseaworthy.

So far the results have been mainly negative. There have been but slightly developed concepts where they did exist and in most cases they have not existed, or if they have it is only in a badly distorted condition mutilated almost beyond scientific recognition. When we pass to occult manifestations, however, the tendency is in the other direction. Only 3 questions were asked regarding supernatural manifestations. These concerned spiritualism and telepathy.

"Do you think the spirits of deceased persons live and *can communicate with us?*" There were 58 of the group who replied in the affirmative! Their belief in this was justified as follows:

²*Ibid*, p. 138.

- 54 had read of instances of communication.
- 3 had dreamed of the deceased.
- 1 had actually been in communication.

The negative replies totaled 39 and the remainder were non-committal. All but 2 of the 58 believed there were only certain persons who have the power of getting into touch with the spirits of the departed and hold communion with them.

The testimony for telepathy was not so overwhelming. Thirty-three thought ideas could be transferred from one mind into another without any external aid. One person gave as the cause for his belief a rather unusual coincidence to which he was a party, but the 32 took refuge in the reading of certain articles for their justification.

None of the group had read anything about hypnosis or multiple personality. The two who had attended college had read a little regarding the subconscious in connection with a course in psychology. Dreams had been the subject of an article in a Sunday edition of a newspaper which was read by one and 3 had read in an advertising folder concerning dream interpretation. Compare this meagre amount with the reading which was actually forced upon their attention centering about the occult phenomena.

It will be frankly admitted that the concepts entertained by this group regarding spiritualism and telepathy are injurious. It must also be admitted that in general a greater faith was shown in the occult phenomena than in the facts known to abnormal psychology. To a certain extent this is in itself harmful. The fact that a large amount of space in certain newspapers and periodicals is featuring hypernatural things tends to lend credence to such impossibilities. Abnormal psychology, on the other hand, tends to remain more academic and avoid all sensationalism. There is a fertile field for semi-popular articles dealing with different phases of abnormal psychology so written that they will catch the eye and the mind of the man on the street. The function of these would be two-fold; they would aid in up-rooting certain unwarranted concepts and would add to the stock of working hypotheses. The psychopathologist and psychologist should avail themselves of the opportunity to relieve their minds of controversial points and produce something that will aid in building fuller, more accurate concepts of their science in the mind of the man on the street. So long as abnormal psychology remains a purely academic discipline it is not fulfilling its greatest mission.

REVIEWS

PSYCHOLOGY AND PEDAGOGY OF ANGER. Roy Franklin Richardson. (Educational psychology monographs, No. 19); Warwick & York, Baltimore, 1919. 100 pp. Price \$1.25.

CHILD'S UNCONSCIOUS MIND. The Relations of Psycho-analysis to Education; a book for teachers and parents. Wilfrid Lay. Dodd, Mead & Co., New York, 1919. 329 pp. Price \$2.00.

PSYCHOLOGY OF THE NORMAL AND SUBNORMAL. Henry Herbert Goddard. Dodd, Mead & Co., New York, 1919. 349 pp. Price \$5.00.

ABNORMAL Psychology is by tradition the province set apart to deal with characteristically "queer" reactions of the human mind, such as dreams, emotional disturbances, manifestations of the subconscious, prodigies of memory and all other sorts of anomalous phenomena which so-called Normal Psychology has overlooked as somewhat too disturbing to the smooth course of its academic teachings. In academic circles the "abnormal" psychologist is—as the unfortunate term would imply, something of a curiosity, something *hors ligne*, and, as such, considered unable to "toe the mark" of the ordinary cut-and-dried University psychology. For this reason, perhaps, the pursuit for their own sake of the subject-matters of Abnormal Psychology has afforded its devotees neither a settled intellectual habitation nor a definite scientific name. Yet these gypsies amid the staid hosts of psychology have, by dint of comparisons, obtained from the remoter fields of mental anomalies, a dawning suspicion that their own more inclusive point-of-view may still prove worthy to inform the particularistic standpoints of the psychiatrist, of the psychopathologist, of the psychoanalyst, of the behaviorist.

Indeed, unless nothing at all can be inferred from the history of science as a whole, Abnormal Psychology, with its wider outlook, should furnish us with a sort of *philosophia prima* or summary philosophy that would supply general axioms for the more particular propositions of the above mentioned specialists. That Abnormal Psychology should develop a characteristic psychological *critique* may be illustrated by a review of these three books, which by their diversity are a challenge to us to take a unified view of the phenomena they testify to.

The roaming and hardy adventurers who go caravanning through the clinic, the psychological laboratory, the school room, the institutions for the feeble-minded, the insane hospital, the religious revival, the rehearsal room of the child prodigy, and the open places where "crowd psychology" shows itself may be presumed to personify Abnormal Psychology as such. They possess a sort of resultant personality with an outlook of their own and a cast of thought peculiar to themselves. Hence, we may speak of the student of "queer" reactions, of mental anomalies, as the Anomalist, a man or woman of definite experience in this field and opinions born of these same experiences. Indeed, the Anomalist should,

ideally, be a person with a balanced view of all the phenomena of Abnormal Psychology—master of all, but slave of none.

From this standpoint of Abnormal Psychology, Richardson's slender and unpretentious volume does not seem very adventurous. But when contrasted with the ordinary cut-and-dried academic presentations of mental Anomalisms—if we may so speak—it is an innovation. It departs from conservative tactics by virtue of dealing with human motive in its more recondite phases, by spreading upon the tablets of scientific record some things really deep in human nature.

That is to say, Richardson's subjects have revealed their vexations, their moments of annoyance, their little—and some of their big—reactions to the pains that have been put upon them in "situations stimulating anger."

The interest of Richardson's "Psychology and Pedagogy of Anger" is, unfortunately, very much obscured by the almost damning deficiencies in typographic arrangement. If we dip here and there in this booklet of one hundred pages, we shall find ourselves somewhat lost owing to the lack of running heads and section titles, needed to make the subdivisions of the topic clear. For this reason, the full tableau of Richardson's topic analysis (largely omitted in the printing of his book) may be given here (p. 413) to show the essential nature of his contribution.

Richardson considers the emotion of anger as having a beginning, a middle or climax, and an after-effect—a simple enough idea, valuable not so much for its novelty as for the fact that it is a subdivision of the topic that insures a further ramification of analysis; thus guaranteeing more intensified attention to the phenomena of anger.

The author's method may best be told in his own words, lifted bodily from page six as below:

METHODS.—The method in the present study has been to observe anger introspectively as it appears in every-day life. Ten graduate students of Clark University and two persons outside of the University volunteered to observe their emotions for a period of at least three months and report to the writer each day from the notes of their introspection. . . . They were asked to observe the conscious fore-period before the emotion begins, the development of the emotion, the disappearance, the diminution the consciousness after the emotion has disappeared, which is recognized as having been influenced by the emotion. . . .

Ten of the observers were graduate men students of psychology. Seven of these had had considerable experience in introspection under controlled laboratory conditions.

It is from the standpoint of the Anomalist, the student of anomalies, as we have called him in previous reviews, that the study falls short. And this comes about from the fact that the subjects in Richardson's analysis did not meet with the extremes of emotion which serve to bring out the deeper characteristics of instinctive reactions, like anger. He has not ventured far enough into the realm of study that is characteristically that of the anomalist, and for which

R. F. RICHARDSON'S
PSYCHOLOGY AND PEDAGOGY OF ANGER

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subjects can be obtained not among a picked class of college students (particularly graduate students) but in the slums, in the home of ill-controlled personalities and in the psychopathic clinics of hospitals. Richardson has collected what came to hand and analyzed it with sufficient minuteness. He goes deep enough into the details of how Subject A and Subject B felt, but he does not gather these various expressions together into a comprehensive picture of anger. In other words, his collection of anger phenomena is extensive and varied enough so far as it goes, but his conclusions suffer markedly from the tameness of the situations that stimulated anger, as dealt with in these reports of introspectors.

The demonstration of the anger-mechanism operating at full blast is thus deficient in Richardson's study. None of his subjects reveals that anger which comports with "battle, murder, and sudden death," which are, after all, phenomena of first rate interest to the Anomalist. Yet his study has the merit of dealing pretty exhaustively with "envy, hatred, malice and all uncharitableness," which are by-effects of anger and part of its phenomena.

It is in the third section that Richardson's adherence to normal material (only in the sense that his subjects are normal) makes itself felt. He would have more to say in Chaps. 3, 4 and 5 about the aftermath of anger (Chap. 3 Disappearance of Anger, Chap. 4 Conscious After Effects) if he had dealt with a serious quarrel among his subjects and had followed the conscious after-effects into the realm so familiar to the anomalist in psychology, of the grievance, the mania for revenge and so on. He might have added to Conscious After-Effects (Chap. 4) a third section entitled (as the anomalist would have it) "Feud, Vendetta and Neurosis." Even with his normal subjects, he might have found more to say about the subconscious aftermath of anger—say, from *dreams*.

From the standpoint of broadening the appeal of Abnormal Psychology, Richardson's deficiencies are more than made up for by the fact that there has been completed an outline and study of emotion, looked at from the angle of established psychology. Richardson has not slighted the prevailing tendency to study mind from the standpoint of *situation and response*, and he has made a very suggestive delineation of the "situation that stimulates anger."

He has also contributed, in the second section, to what may prove to be a valuable compromise between the ideals of the radical group in psychology known as behaviorists, and those who are not satisfied with the rigid exclusiveness of behaviorism, by entitling his second chapter: "The Behavior of Consciousness."

If we admit "behaviour of consciousness," then the way is open for a complete reconciliation between those who make behaviour their object of study and those who still cling to "introspection." One cannot, of course, exactly compare Richardson's gathering of examples showing the "behaviour of consciousness" in anger with the studies of Cannon showing the "angry" behaviour of say the adrenal gland in the case of a cat that is being barked at by a dog. But—with the exception of the lack of the printer's art to bring out the intel-

lectual values—Richardson does give particular attention to exhibiting the effects that go to make up the response of consciousness to anger situations.

In general, the plan of the study of the "Behaviour of Consciousness" is worthy of imitation by other students who may wish to continue an analysis of emotion from the psycholexic standpoint, that is to say, as the derivation of the words imply, emphasizing the variety and scope of facts "gathered" (legomen) rather than what can be "measured" (metro).

The importance of Abnormal Psychology to education is brought to our attention by Richardson's animadversions in Cap. 5 concerning the emotional function, as also in his preface by his references to Aristotle. The question is inevitably raised in one's mind as to whether a more intensive study of anger and other emotions would not also represent an intensive contribution to education.

Richardson's work may be called an innovation because it may help other academic psychologists (i. e. affiliated with universities in methods or employment) to realize that they, too, can handle with dignity and without the much too-feared luridness of Psychoanalysis some other one of the human passions. And although Psychoanalysis is supposed to have paid more than enough attention to the sex life, it would be amusing to have the world discover the inadequacy of the Freudian cult, if a psychologist in academic circles should have the courage to publish on the plan of Richardson an analysis of the falling-in-love experiences of say twenty selected subjects in either sex at a co-educational institution.

THE STRIKING thing is (for the Anomalist) that, in these three books, not only does Richardson stress Aristotle's principle of the education of the emotions, but that this suggestion forms the main current underlying Wilfred Lay's work on the "Child's Unconscious Mind" and also is frequently adverted to by Goddard, especially in his conclusions to "The Psychology of the Normal and Subnormal." It is the topic now coming to be called "mental engineering" or better "mind husbandry." Thus we see exemplified the striving of the constructive temperament of the educator, who must rely on something not altogether scientific. For we may truly say of Education what Morton Prince has said of Re-education (in the neurosis), namely that it is a task of Art, not of Science.

These three books may thus be appraised—and praised—as weighted mainly with constructive thought, looking toward the building of character, with particular reference to the emotional life. Our authors echo, almost word for word, the statement of Descartes, when he penned the opening sentences of his "Treatise on the Passions":—

"There is nothing more clearly evinces the Learning which we receive from the Ancients to be defective, than what thy have written concerning the Passions. For although it be a matter the understanding whereof hath ever been hunted after, and that it seems to be none of the hardest, because every one feeling them

in himself, need not borrow foreign observations to discover their nature. Yet what the Ancients have taught concerning them, is so little, and for the most part so little credible, that I cannot hope to draw nigh truth, but by keeping aloof off from those roades which they followed. Wherefore I shall here be forced to write in such a sort, as if I treated of a matter never before handled." (P. 1. "The Passions of the Soule," London, 1650).

It follows from this precedent in the study of the emotions that the three works of Richardson, of Lay and Goddard, are in some sense, more or less unwittingly harking back to DesCartes' psychology of the emotions and attempting to resume this study in the same spirit that has made the Cartesian treatise a monument of suggestiveness. Let us hope that the suggestions in these works mature better and secure more general consumption than similar progressive ideas have obtained in the last three centuries.

DesCartes himself proposed that we advance toward a definite goal of improving the nature of man by mind-husbandry, not through the archaic devices of the ferrule on the pupil's hand or the rope's end on the sailor boy's back, but through a technical process deliberately in keeping with available knowledge of the nervous mechanism. This is the crucial point; and this old idea of mind-training must be continually furnished with its modern implications, as these three books in their measure do.

This progressive technique of training has indeed already been endowed by Dr. Morton Prince with a definite name. He designates the scientific development of habits and the training of the emotions by the name of "complex building" (See "The Unconscious," 1914). This comports with a clarified conception of the elements that go to make up a mental reaction and a visualization of the operations in the nervous channels or neurograms. At the same time, he recognizes that the morbid complexes on which the psycho-analytic school have written so strikingly are not to be set apart from normal mechanisms in which "Complexes" (as normal systems of memories or habits) may be operating in less lurid fashion.

The author of "The Child's Unconscious Mind" is more deliberately concerned with the improvement of methods of training the human being, than the other two writers. He does not attempt a book in that tone of laboratory experimentation which Richardson maintains throughout, nor does he assume to be writing a text-book as Goddard does.

The sub-title is "The Relation of Psychoanalysis to Education, a Book for Teachers and Parents." As such, it may be recommended to both these classes of readers, provided they will take it with a grain of salt. The necessary sprinkling of salt should come from the continual remembrance that this writer is essentially a convert to the well-known Freudian theories, and that he is trying to give them fruitful application in his own particular field, which is that of Education. As the author of *Man's Unconscious Conflict* he gave a pretty expression of the Freudian viewpoint concerning the more inaccessible regions of the

soul. He described an Olympus, as it were, of the Nervous System where the various psychoanalytic gods and demi-gods continually disport themselves under the name of Libido, Endopsychic Censor, Repression, Sublimation, Regression and the like. And, in true mythological style, he described their disputes for the governance of the mind—the great occasion of Man's Unconscious Conflict.

With this successful beginning made, it was natural that Lay should wish to carry over his interpretation of the Unconscious Conflict into the field of child training. In any case, the anomalies of mental growth are best exhibited from the angle of child-study. His introduction shows this very clearly:

"A deeper knowledge than ever before is now possible concerning the nature of the child, and with it the nature of the problems of education."—"The new knowledge is a knowledge of a hitherto unexplored, or at least unsuccessfully explored, stratum of the mind, as evident in the child as in the adult, and in the child more controllable than in the adult, because more fluent, less fixed and crystallized." (p. 1).

His conception of the "method of the newer psychology" (p. 1) appears, however, rather perfunctory, for what he himself applies is not the standard method of Science, but distinctly the dogmas of Psychoanalysis.

THE CATACOMBS OF THOUGHT

Touching the technique of complex-building we may question whether Lay can justify the psycho-analytic methods of approaching this task as sufficiently rigorous. In this field, we face a scantiness of well-thought-out principles of SYNTHESIS, similar to the deficiencies of ANALYSIS that Descartes contemplated about A. D. 1640, when he wrote his "*Passions de l'Ame*." Indeed Abnormal Psychology is only just now bringing into clearness the conception of the Automatic Self which Huxley's Essays brought to the attention of scientific thinkers, after Darwin's researches had revived the topic of Animal Automatism.

If Lay adhered to the mainly physiological conceptions of the Automatic Self, in the style and mode of Thomas Huxley, instead of plunging into disquisitions on the varieties and combinations of conscious, subconscious and unconscious processes, he would have left an impression of greater clearness upon the reader. As it is, his dealing with the Subconscious is marred by an almost amusing adherence to old-style philosophy, in place of modern physiology—which he scarcely touches at all. This is indicated by his ringing the changes on all the possible combinations and permutations of Subconsciousness and Consciousness that could conceivably go to make up a given mental state. And he accomplishes very little thereby, except a good imitation of an old-style exercise for turning a syllogism every-which-way! Thus he takes the present provisional term "the Subconscious" and its derivatives too seriously.

Some day, let us have a round-table conference where leading gentlemen

interested in the sub-cellars of the mind shall come to an agreement to intend or *mean* the same thing when they use the same word. As yet neither we nor Lay possess the advantage of clear terms on this topic.

There are other things in his book that he deals with much more successfully than with the attempt to give a systematic view of the relation between consciousness and subconsciousness. In practical things like the mechanism of blame he "comes out strong" with cautions about the teacher's attitude, of which an instance is the following:

"The attributing of blame to anyone is concentrating attention on the destructive aspect of the act, magnifying it in a way gratifying to him, and satisfying his desire for personal attention, blaming anyone for what he has done once or habitually does is a very irrational procedure for a teacher who believes that many acts are caused by unconscious thoughts, for the reason that no person who has not been introduced to his own unconscious and shown a method of controlling it, can be held responsible for what it makes him do. This fact does not release a pupil from real responsibility for his conscious acts done from conscious thoughts. It only places responsibility for certain errors where responsibility really belongs, if causation by the unconscious thoughts involve any responsibility." (*The Child's Unconscious Mind*, p. 125).

The author's illustrations of blunders and lapses show us that he is at home in Psychoanalysis; he gives enough illustrative material to make his text interesting. In delving into unconscious mental processes he tries to give personal observations whenever possible. His work is addressed to teachers and, so far as lies within his power, he supplies *definitions* to make the study easy. He earns our gratitude in this way by his effort at definiteness, and, further, by avoiding the excessive reliance of psychoanalysts (for their illustrations) upon citations of history and literary works and upon quotations of poetry.

THE QUESTION OF VERBALISM

Lay's difficulty is that he has too much to say: more than our inadequate science can accommodate in its present vocabulary. This, indeed, is unfortunately the condition of affairs that compels Lay to beat out a few simple Freudian conceptions into a pie for the whole school tea-party. Considering the difficulty of such a thing he does it very well, but the crust breaks down every now and then; thus, actually the weakness and lack of cohesiveness of the Freudian formulations are very well depicted. He does furnish a sort of a language, or marks to call things by, that can be made to contain some very helpful ideas in child-training.

He deserves to be commended for making a striking practical presentation, on the platform of a somewhat shaky scientific cult like Psychoanalysis.

Of course the great trouble (and this book shows it up) is that the Freudian conceptions do not really fit very well into the scheme of normal life: "Sublima-

tion" is an involved conception, obscuring the fact that what it really implies is re-education out of bad habits; lapses and blunders do not always signify trouble in the "unconscious" wishes," but may be mere fatigue (and, as such quite differently of interest to the teacher); Resistance and Transference are one-sided notions that the teacher can take too literally from psychoanalysts. In result, by taking too much for granted from Psychoanalysis Lay's system for explaining the unconscious mental life is weak in many spots, from the standpoint of pure science.

It remains to be seen, however, how long this system will help us when the capacity is tested beyond its present limited requirements for satisfying the beginner. But even if Lay's application of the Freudian method to Education should be temporary it will still have served some purpose in bringing the unconscious life of the child to the fore-consciousness of teacher and parent. The real application of Abnormal Psychology to education is a long way off and when it comes it will have to be something more mechanistic than Lay has been able to supply for complex-building.

To many this book will be a "revelation" from the fact that it asks the parent and the teacher to conceive at all that there is a "Hinterland" to be explored in the mind. (Lay quoting H. G. Wells).

Teachers may well use it as a *vade mecum* in exploring the "deeper strata" of their pupil's mind. Systematic correctness is not the first need at this stage of Abnormal Psychology. The main thing is OBSERVATION AND AGAIN OBSERVATION of mental phenomena, of what lies back of a given act in the schoolroom or on the play-ground. The volume abounds in sincere searchings after the essential and informative truths of human nature in its below-the-surface sense. And the reviewer pays his respects to the earnest purpose that underlies this résumé of what Psychoanalysis can suggest to the teacher.

ANYTHING that Goddard writes is likely to be of interest: has not the author of "the Kallikak family" (something everybody can understand) earned the right to many a success d'estime, if nothing more?

His pronouncements in normal and subnormal psychology adopt a tone of finality that is fitting to the role of a text-book. Goddard seems, in last analysis, to be no less interested in complex building than Lay. His preface states the important things to be considered as (a) concept of mind unity and (b) study of the emotions. But whereas Lay essentially presents to us a study of the way and the form in which Complexes have BUILT THEMSELVES into the child's consciousness or subconsciousness (as the case may be), Goddard is concerned in trying to make us visualize the physiological conditions. That great tangle of fibres in which complexes can be developed is discussed by him with surprising directness, in the first chapter. This leads directly to the "subnormal" and the topic of how the subnormal individual's brain finds itself limited in constructing enough complexes for the business of Adaptation. This may prove a more

than usually vivid warning for too sanguine practitioners of complex-building, or re-education.

In a sense, Goddard apologizes in advance for any misfit between his text-book and the province of the Abnormal in general by a title narrowing it down to the SUBNORMAL branch.

It is a textbook that is likely to hasten the popularization of Abnormal Psychology as a science destined to take more closely into account than even Goddard does the relation between mental anomalies and the nervous mass. But that Neurology is not ready for even his degree of simplification is more than evident.

Goddard's slashing way of settling involved strands of opinion gives refreshing support to the dictum of a very successful class-room exponent of modern physiology. We quote from memory a remark of Dr. Burton-Opitz of Columbia University:—

"I want them to understand Physiology and not simply be able to talk about it. I want them to get into the spirit of analyzing the bodily mechanism. And to simplify things (whenever I think it will help) I tell the story *wrong*; and, then when they are ready for it, I go back to the topic and put in the corrections."

This is what Goddard in a measure does. He treats many things on this plan that the "end justifies the means." The University laboratories are likely to protest against some of his too ready simplifications.

The "philosophy of the organism" is well-represented by Mosso's "Mechanism of the Emotions" in the Appendix. But the relative value of different trends of opinion and different modes of approach to the problem of Psychology receive scant attention. The Appendix also contains an excellent Bibliography, well arranged. The summaries to be found at the end of each chapter are a valuable addition to this text-book; and the illustrations throughout are good, with explanations suitably attached.

Although headed for simplicity, Goddard omits a very possible simplification in his language by failing to employ the word *neurogram*, already sufficiently made known by Prince; he uses the term *neurone-pattern*. This conforms of course to the employment of the term *neururgic pattern*, by Henry Rutgers Marshall, and to the further use of a similar term "*action pattern*" by a psychophysiologicalist like W. B. Cannon, also the term *behavior pattern* by the Behaviorist School.

Goddard could very well have increased the definiteness of his presentation by building up his conception of mental action on its physical side in harmony with the "neurogram concept" of Prince. It could be linked up with the behavior of consciousness. Even as it is, with a little labor of cross-referencing to other works on the physical basis of cerebration, we could easily develop Goddard's text-book into an excellent stepping stone by which the neurographic conception might cross the threshold of classroom consciousness.

Goddard has treated too cavalierly the sacro-sanct question of human T-H-O-U-G-H-T which he spells T-H-O-T. When we first saw this barbarism at the head of two of his chapters, which deal with the process of mentation, we

felt suddenly transported to the realm of tomfoolery. This is a sample of the startling practices in "cutting corners" that confer upon this book a simplified-spelling aspect—an aspect that arouses an unnecessary distrust of the scientific steadiness of the author.

From the standpoint of the Anomalist, who is delighted to see the Gordian knots of psychophysical parallelisms irreverently cut in twain and who is anxious to see the chariot of academic Psychology used as a vehicle to garner the fruits of experiences in the province of the Abnormal rather than treated as an exhibit in a museum, it would seem that Goddard had constructed a very good text book. In common parlance, it ought to make professors no less than students "sit up and take notice."

IT IS for what these works look forward to that they are valuable rather than for such finished products as they have to offer. The reader will have his mind prepared for the day when Abnormal Psychology shall have become a science more exactly and pointedly adjusted to its task. So far, they suggest with one voice although in quite different tone-qualities what this task should be: the correction or rectification of aberrant human thought and character. In different degrees, they focus upon the fundamental theme of the control of the emotional life. This is a subject left too much to the usually bootless presentations of novelists and dramatic writers, or moving picture producers.

Interest in the emotions is still in its spectacular phase and, as Richardson reminds us, the education of the emotions has been advocated for ages without any distinct advance of scientific technique being registered in this domain.

Why the emotions fail to enter the realm of scientific management and educational piece-work, in human engineering, may be gleaned by perusing these three books. Each contribution is a partial response to the inquiry:—

Richardson, by his reports of introspectors, wittingly and unwittingly shows what limitations there are to the knowledge to be had about even one emotion, unless one is willing to go "out of bounds" academically and follow the methods of the psychological gypsy we have supposed the enthusiastic Anomalist to be. One must study emotion *ON THE SPOT* in real life, not merely from a laboratory desk, with data handed in by subjects—*self-consciously such*.

Lay shows us unconsciously that in spite of the much more grasping methods of fact-collecting adopted by psychoanalysts and their ilk (who deal with emotionalized people in the raw individually and not in statistical masses) still the intellectual discipline of workers outside regular Psychology fails to co-ordinate the data of Abnormal Psychology.

Goddard, (being accustomed to putting things in words of one syllable for and concerning the feeble-minded) as if careless of fine distinctions, sweepingly lays down a concrete foundation for Abnormal Psychology by which the student may hope to place on a sort of common ground the various offerings that crop up in one or another of the special fields of Abnormal Psychology.

L. H. HORTON.

DYNAMIC PSYCHOLOGY. By Robert Sessions Woodworth, Ph. D. Columbia University Press, New York, 1918. Pp. 210. Price \$1.50.

Professor Woodworth begins this revision and enlargement of his *Jesup Lectures for 1916-1917* by presenting a brief description of the many streams of thought and investigation that have united to form the modern movement of psychology. As one of the oldest, most independent, and influential of the original sources from which this movement has developed, he would place abnormal or pathological psychology, as illustrated by the early work of Pinel and the modern contributions of such men as Binet. He concludes that "brass instrument psychology," to use an expression of William James, is but a small and over-emphasized part of the whole modern movement in this science.

In a lecture on "The Problems and Methods of Psychology" the extreme behaviorist is criticised for wishing to exclude a legitimate method and object of study and, on the other hand, the extreme introspectionist who would exclude the study of behavior by objective methods is considered equally at fault. Both methods of attack have yielded rich results. It is a question of emphasis. In reality, much of the experimental work done from the time of Fechner to the present has really been on human behavior and only incidentally, if at all, on consciousness. If certain secondary criteria are excluded, there is practically no difference between the simpler forms of introspection and ordinary objective observation. However, according to Professor Woodworth, the description of consciousness from the introspective or behavioristic point of view is not the real aim of the workers in this science. From Locke, Berkeley, and Hume, to the present-day workers "the actual interests of psychologists, as revealed by the problems taken up, have centered on the problem of cause and effect," *i. e.*, dynamics, the same phase that interests the beginner in psychology. Consciousness and behavior, separately or together, do not provide a coherent system for the casual treatment of the mental side of vital activity.

For dynamic psychology there are two problems, that of "mechanism" and "drive,"—how is a thing done, and what causes it to be done? While "drive" or "motive" is usually considered as something external, Professor Woodworth, by employing the physiological facts of reinforcement and inhibition, prepares the way for a conception of inner motive. Reinforcement and inhibition show to him conclusively that one nerve center is able to furnish drive for another. "Thus, though the drive for nerve activity may be ultimately external, at any one moment there are internal sources of influence furnishing drive to other parts of the system." Therefore, "drive" is not essentially distinct from "mechanism," and it is argued that any mechanisms, particularly those directed towards consummatory reactions, come to act as drives.

In the third lecture or chapter, "Native Equipment of Man," which is perhaps most characteristic of this contribution to dynamic psychology by Professor Woodworth, native equipment is held to include "aptitudes or 'gifts' for certain activities, or for dealing with certain classes of things." These native capacities

are set off from instincts in that they do not have ready-made reactions to stimuli. Hence these mechanisms are only gradually developed through the experience and learning of the individual. Professor Woodworth stresses the important driving powers of these mechanisms developed on natural capacities of the individual for dealing with certain classes of objective material, *e. g.*, machinery, mathematics, and music, and would list them as belonging to the prime movers of human action, contrary, he thinks, to the commonly accepted view of motivation. In fact, he states that the definite aim of this book is to show how such mechanisms are powerful drives and that any mechanism, once it is aroused, is capable of furnishing its own drive and also of lending drive to other connected mechanisms, and this wholly aside from the "overhead power system of the instincts." Incidentally, this point of view leads him to insist that the organism is not naturally inert to the high degree signified by certain psychopathologists.

In lectures on "Acquired or Learned Equipment," "The Factor of Selection and Control," and "The Factor of Originality," Professor Woodworth further develops his conception of drive. It is wholly impossible for him to believe that the industry of the genius is driven from hunger or sex or rivalry or any of this class of prime movers. The attitude of play characteristic of genius is cited as demonstrating that the activity contains the drive within itself.

Experimental psychology has treated of mechanisms more than of drives. On the contrary, psychopathology concerns itself more with drive than with mechanism. Consequently the author finds much in "abnormal behavior" that is of importance for his view of motivation. The feeble minded are not only lacking in drive but also in mechanism, and since these are not fundamentally different, if they can be taught mechanism, they will thus be provided with motivation. The delusion of the paranoiac, initiated by some normal (instinctive) drive, becomes crystallized through the process of trial and error and comes to act as a drive, on its own account facilitating and inhibiting actions and perceptions that would otherwise be possible but not probable.

The author finds many reasons for disagreeing with the Freudian psychology and carefully criticises its conceptions of suppression and sublimation. Although regarding the sex impulse as a prime mover, he is convinced that if this impulse alone were in action, the resulting behavior of the organism would usually be much more direct. Many social amusements undoubtedly draw the sex motives into their service to add spice to play, but without other drives even the amusement of dancing would not exist. Since this is true of behavior that is obviously sexual, or may be given such an interpretation, "it can scarcely be less true in behavior that seems to be fundamentally driven by quite other motives." If the mechanisms developed by the abnormal individual, whether genius or insane, thus prove capable of supplying drive in and of themselves, it would seem that it is characteristic of all mechanism whether with abnormal or normal individuals that they should become drives, and consideration of them as such is, he believes, of greatest importance for dynamic psychology.

This nicely made and very acceptable volume by Professor Woodworth is written in a charming style; it has been rendered convenient by references and index, and will provide a useful auxiliary text for courses introducing general psychology.

Nutrition Laboratory, Boston.

W. R. MILES.

HUMAN PSYCHOLOGY. By Howard C. Warren, Stuart Professor of Psychology, Princeton University. Houghton Mifflin Co. Boston, New York and Chicago, 1919. Pp. xx, 460; figs. 68. Price, \$2.75 net.

By way of philosophic contrast, the professor at Princeton has given the world a text-book of psychology "with a soul" or at least a mind—a mere detail which Professor Watson's materialistic system tries to do without, as we have just seen above. The difference in the two views (and the matter is suggestive of the failure of the master-behaviorist's definition of psychology) is expressed by two sentences (from page 29): "Mental life consists in the adaptations of an organism to changing conditions of its environment, and the processes which bring about these adaptations constitute experience. Experience includes behavior and consciousness—behavior being the action of the creature upon his environment, and consciousness an effect of environment on the creature." What further could be sought for or declared? The organization of organisms is two fold, vital and mental, the latter including among other functions, rational action; in man mental life "may even replace the vital life as the chief factor of his existence." In the very humble opinion of the reviewer this attitude represents the rational ultima Thule of the infection (by no means an epidemic) with the Bacillus behavioristicus.

The twenty-three chapters (four in the appendix) of this excellent text by the well-known editor of the *Psychological Review* are titled as follows: The science of psychology; the organism; the neuro-terminal mechanism; physiology of the neuron; stimulation, adjustment, and response; behavior, (two chapters); conscious experience; the senses (two chapters); the components of mental states; primary mental states (two chapters); secondary mental states, (two chapters); succession of mental states; attitudes; character and personality; organized mental life; the mind-body relation; mechanism and purpose; neural activity; and the visual process. Directions for performing the exercises. Index (adequate because detailed). Twenty-three "tables" add greatly to the value of the book because they are systematizers and therefore fixers of the learner's concepts: "Classification of science; vital and mental functions; human reflexes; human instincts; instinctive tendencies of man; progress of learning; fundamental operations of conscious experience; spectral lines and color range; complementary colors; classes of odors; threshold of intensity for taste; classification of the senses; classes of mental states; values of the Weber constant; secondary mental states; human emotions; classification of sentiments; classes of associations; human attitudes; human dispositions; higher human attitudes; classification of temperaments; and visual phenomena."

So famously has Professor Warren stated certain special conclusions regarding mental life which his book has aimed to bring out, that perhaps we can not do better than to quote them in full. They read as follows:

"(1) The mental life of man and other creatures depends upon the presence of an *inherited neural mechanism*. Every conscious experience is accompanied by activity of the nervous system. Conscious experiences, or mental states, may be regarded as the subjective aspect of nerve activity. The complexity and effectiveness of these neural processes depend upon the degree of structural organization of the inherited neuro-terminal system. In man this system is highly organized; it is derived jointly from two parents and is due in part to each.

(2) Mental life depends also upon the presence of an *active environment* which operates upon the neuro-terminal system through the process called stimulation. The data which enter into experience are derived either directly or indirectly from stimuli outside the body, the internal stimuli being traceable ultimately to previous external stimulation. In man the social environment is an important factor in developing the higher phases of mental life.

(3) Mental life depends, accordingly, upon the *interaction of a creature and his environment by means of a neuro-terminal system*. Mental activity may be regarded as the stimulative effect of the environment upon the creature, with the resulting responsive effect of the creature upon the environment brought about by neural processes.

(4) Each specific manifestation of mental life may be studied as a sequence of stimulation, adjustment, and response; this chain of processes constitutes behavior. The most important factor in behavior is the *adjustment process*; this may be studied by the human individual through observation of his own experiences. Self-observation is examination of the central adjustment phenomena as mental states, or conscious experiences.

(5) The types of mental states found in man are a *gradual growth*. Even our attitudes, character, and personality undergo development during our life-time. They are not implanted at birth, but are formed by degrees. While the mental states which appear in the adult human individual may be investigated separately as static phenomena, the organization of mental life which produces them can only be adequately explained in genetic terms. Mental organization develops gradually in each individual; its structural basis has evolved step by step in race history.

(6) The evolution of every structure and of each type of process concerned in mental life depends upon its utility. In order to survive, an organism must be *adapted to its environment*. Like every other biological product the neural mechanism, by whose operation experiences are organized, is believed to have arisen originally through some chance variation—that is, through some new combination of factors in the germ cells. The persistence of the new structure is due to the fact that the individuals which possess it are more *fitted*.

to survive than those in which it is lacking. The same is true of the various forms of experience. The higher types of mental states (such as thought and language) which have grown up and established themselves in the human species, have arisen and persisted because they proved useful in mediating between man and his environment."

Altogether, this work is the most inclusive, the most complete, new text-book of psychology known to the present reviewer, vieing with Titchener's in this respect. It appeals strongly to the practical pedagogue because it is arranged on the principles of the easiest and truest acquirement. Even the saving and important touch of humor is present—the blessed ten-in-one oil which makes learning a pleasure, despite the opinion of certain pseudo-dignified snobs to the contrary. The illustrations are excellent and some of them original. Lists of references extend the influence of each chapter. The table of contents is complete.

Many readers, especially they who are in contact with many abnormal minds, will miss from this work, so timely in other respects, adequate emphasis on the dynamic point of view. Freud's views are briefly discussed, but the sub-conscious aspects of mind, as presented by Ribot, Bergson and sundry American writers, is given scant discussion. One looks in vain for the kinesthetic basis of perception in general (looking, listening, sniffing, tasting, etc.), although nothing is more essential for a real understanding of the teleology of organism, no one point more indispensable to the sanction of the flesh. The dynamic view-point is present, but the static notion somehow gets more notice than it deserves. Inhibition is scantily discussed; on the other hand the more or less meaningless plan of the areas of the great cortex is given in some detail, while the layer-hypothesis is ignored.

On the whole, the present reviewer has no hesitation in believing this work the most complete text-book of psychology for the use of all who need a real text-book of the science that has been recently placed on the market. The neuro-psychiatrist and the psychopathologist any more than the college student can not afford to long remain without its far-reaching substance.

GEORGE VAN NESS DEARBORN.

SARGENT NORMAL SCHOOL.

NERVE CONTROL AND HOW TO GAIN IT. By H. Addington Bruce. Published by Funk & Wagnalls Company, New York and London, 1918. Price, \$1.00, net.

H. Addington Bruce has here collected together and published in book form, some of his "Daily Talks," on various aspects of the subject of nervous and mental health, which have appeared in the columns of the important group of American and Canadian evening newspapers known as the Associated Newspapers, with their tremendous circulation. His talks deal, for the most part, with practical suggestions as to prevention and self cure of nervous and mental distress,

which, as he says in his preface, reduces itself to thinking healthfully and learning to live healthfully.

There are, in all, fifty-eight (58) "Talks," which are brief and to the point, and on a large variety of topics. What he says is interesting, illuminating, and for the most part true. He discusses such various subjects as "What Nervousness Is," "Signs of Nerve Strain," "Habit and Nervousness," "Hurry Means Worry," "Silence and Relaxation," "Colors and Nerves," "Posture and Character," etc.

A few of the points he mentions may be enumerated. "Nervousness is not a disease in itself. It is, rather, a symptom of ill health from any one of a number of causes, some of which are primarily physical, others primarily mental." One must ascertain "the precise cause of the nervousness in each individual case and give treatment appropriate to the particular case." "Early training of the will power, with special reference to control of the emotions and suggestibility, is therefore the surest prevention known of the functional nervous diseases." (Very good, indeed).

He believes in the existence of so called "habits pains," of subjective nature. In this, I am convinced, he is in error. I believe I have proven conclusively, to my own satisfaction, at any rate, in a paper entitled "Are There Subjective Pains?" the *Medical Record*, August 25, 1917, that pains are always of peripheral origin, and that there cannot exist subjectively induced, ideational, hypnotically induced, delusional or imaginary pains of any sort.

He pleads with the nervous or mental patient: "Don't talk about symptoms," but "Think health, talk health."

He stresses the importance of good physical health, of the danger of hurry and worry, the advantages of repose.

"Learn to play," he urges. In his talk on "Silence and Relaxation," he rightly declares: "Learn to relax both physically and mentally."

In his chapters on "Headaches" and "Nervous Dyspepsia" he speaks of some of these cases being of directly ideational, habit-formation origin, which is not scientifically possible or true. (See reviewer's paper "How Far Can the Mind Really Influence the Body," in *Medicine and Surgery*, March, 1918).

The value of sunshine, of cheerfulness in the home, even as radiated from the hangings, rugs and furniture, wall paper, etc., is discussed.

Yellow and red are potentially over irritant and exciting; deep shades of blue, approaching violet, are depressant; and green and light shades of blue are tranquillizing. Hence green and light shades of blue should be favored in the choice of color for household decoration or articles of dress for nervously inclined or irritable, excitable persons.

"Sit straight, stand straight, walk straight" is his advice, especially to the nervous.

Certain common causes of restlessness are enumerated.

In general, then, from the above survey, one can see that Bruce has a really

deep understanding of the so-called neurotic or sensitive person. He realizes that the fundamental trouble is the over sensitiveness, the impressionability or reactivity or irritability—the relative instability. And that the problem is to find the cause or causes, and the diverse means to prevent unrest and secure or gain poise. The methods necessarily vary in each case.

Bruce is to be highly praised for the clarity and directness of his presentation, which the average layman can fully understand.

Every physician, every nervous patient, every normal, healthy person, will find the book of interest and of practical value. It is, except for the reference to habit (ideational) pains, including headaches, and dyspepsia, a safe, sane and reliable book which can be put into the hands of the nervously ill but intelligent patient.

Let Bruce keep up his good work—for he certainly is doing much good by his writings, published so widely and read by such a large audience as is afforded by the Associated Newspapers.

MEYER SOLOMON.

THE EROTIC MOTIVE IN LITERATURE. By Albert Mordell. Boni and Liveright, New York. 1919. Pp. V. No. 250. Price, \$1.75 net.

In this volume we have Freudian principles applied to literature by a man whose knowledge and understanding of letters are more than those of an amateur. While Mr. Mordell's grasp of psychoanalytic principles is adequate, it is in his application of these to authors and their works that his judgment and skill are best evidenced. And the result is, to be sure, itself literature, or literary criticism of a high order, rather than a contribution to psychoanalysis: yet it can hardly fail to interest psychoanalysts if only because it shows that Freudian principles work well in the hands of a man of letters.

To any but Freudians the word "erotic" in the title will be a bit misleading, although the Author states (p. 1) that, "the terms 'unconscious' and 'erotic' are almost synonymous." It is with the influence upon an author of his libido that the book deals; and the ego-motive, in any Adlerian sense, is so subordinated to the sexual as to be almost ignored. Egotism becomes "*self-love*." Of this sort, then, there are concise but often carefully documented studies of Homer, Keats, Shelley, Byron, Browning, Swinburne, Cowper, Gautier, Poe, Renan, Dickens, Ch. Brontë, Stevenson, Hearn, and Kipling: with briefer comments on Dante, Petrarch, La Rochefoucauld, Balzac, Nietzsche, Whitman, Tennyson and many others.

Mr. Mordell is a faithful Freudian and with him, as with so many others, psychoanalysis, thought not an exact, is a deductive science. That is, he deduces from facts about authors and their works with the aid of Freudian principles his conclusions; he does not get by induction from the facts any new psychoanalytic principles or new refinements thereof. It is not thus that any possible errors in

the original formulation of the Freudian creed are going to be corrected. Thus it should seem that the principles of repression and the unconscious are being overworked when we read that, "The wish . . . to devote oneself to the following of an ambition or the pursuit of a certain kind of labour, are all symptoms of repressions" (p. 129). Should we, then, except for our repressions, be doing nothing? Furthermore, there are non-Freudian principles that need as well to be taken into account. In the chapter on "Sexual Symbolism in Literature," for instance, several paragraphs on the symbolism of words lack point because the Author forgets that *every* word, unless a proper name, is a symbol, or better, a veritable palimpsest of symbols: and the symbolism is by no means exclusively sexual. On the whole, it is the palliative or curative aspect of literature, as regards both an author and his readers, that is brought out in Mr. Mordell's study.

The Author rather exalts the importance of emotion: and is singularly insistent on the literal reality of what Darwin and others have called "racial memory." "Our psyche never forgets the episodes in the lives of our ancestors" (p. 173). He has unearthed a paragraph of William Hazlitt's in which Freud's theory of dreams is in the clearest terms anticipated. "Freud's work may almost be called a commentary on this extraordinary passage" (p. 32). But one cannot review in detail a work of which every page is interesting. The book deserved more attention paid to small points of grammar and other exactnesses; and it very much needs an index.

Mr. Mordell's "Erotic Motive" is valuable as literary criticism, as a study in the psychology of literary composition and of "genius," and as one of the best applications of psychoanalysis to works of literature.

EDWIN B. HOLT.

RELIGION AND CULTURE. A Critical Survey of Methods of Approach to Religious Phenomena. By Frederick Schleiter. Columbia University Press, New York, 1919. Pp. 193 and Bibliography.

As the title indicates, this volume is intended rather as a critical review than as an original contribution to this extensive subject, one covered by such terms as comparative religion, social psychology, anthropology, and ethnology (in the German sense). The author is mainly concerned with the difficult question of methodology; he discusses the criteria we possess for the interpretation of anthropological data, the principles underlying the various modes of approach, and the most suitable starting points for investigation. These are very complex problems, which can only be discussed in an appropriate place and at considerable length, so that the reviewer will confine himself here to giving his impression of the book as a whole.

One feels that the author, doubtless in the endeavour to be objective, has refrained too much from constructive criticism of the methods he deals with, so that the book consists too much of a series of quotations of one theory and

method after another, and fails to present the organic relations between them in an imaginative way. It serves the purpose excellently well of orienting students as to the main trends of work in these fields, and provides a useful and well-chosen bibliography. That his presentation of these, however, is not always to be depended on may be illustrated to the readers of this Journal, familiar with the dynamic psychology of Freud, by the following passage, where they will be astonished to read that Freud "considers that they (i. e. the traditional principles of associationism—contiguity in space and time, cause and effect, and similarity) constitute a satisfactory explanation of the juxtaposition of psychic content involved in magic. The support of this position by Freud is nothing short of a curious anachronism." As it is mainly Freud's work which has made such a position an anachronism, the comment is distinctly entertaining. The absurdity of a further passage "Freud states that he was led to the use of the term *Allmacht der Gedanken*" by means of the psycho-analysis of a man who seemed to possess it in a striking way" may be due merely to careless writing, but the author's grasp of the subject is not such as to encourage one to give him the benefit of the doubt on the point. The usefulness of the book is unfortunately marred by its being written in a barbarous German-American which makes it very trying to read.

ERNEST JONES.

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The Problem of The Nervous Child. By Elida Evans. Dodd, Mead & Co. Pp. VIII and 299. \$2.50.

The Journal of Abnormal Psychology

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1920-1921

RICHARD G. BADGER

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NUMBER 1

ORIGINAL ARTICLES

CHARACTER VS. INTELLIGENCE IN PERSONALITY STUDIES

BY GUY G. FERNALD, A. M., M. D.

PSYCHOPATHIC LABORATORY, MASSACHUSETTS REFORMATORY

IT is herein attempted to indicate that personality studies should recognize character as an integral field of inquiry; since an evaluation of personality based on investigations of intelligence only or of intelligence plus such consideration of character traits as is incidental thereto is incomplete and misleading. Possibly the method of choice is to recognize categorically the three infields of inquiry viz. mental disease, intelligence and character.

Intelligence and character, as popular terms in current use are not synonymous. They are applied in different fields of inquiry. In personality studies and in the teachings based thereon the use of these terms is found to be convenient and necessary. Their meaning and application, as of others appearing in this presentation and elsewhere have been clarified by Dr. Morton Prince whom we quote.

"Personality is the sum total of all the biological *innate* dispositions, impulses, tendencies, appetites and instincts of the individual and the *acquired* dispositions and tendencies—acquired by experience. The former would embrace the inherited psychophysiological arrangements such as those of emotions, feelings, appetites and other tendencies manifested in instinctive reactions to environment; the latter the memories, ideas, sentiments and other intellectual dispositions acquired and organized within the personality by the experience of life. The integration into one functioning organism of all these innate and acquired dispositions with their inherent forces and the mechanisms by which they come into play is personality.

"Personality includes more than character. Character is the sum total of the predominating dispositions or tendencies popularly called traits. Thus in the domain of innate dispositions every personality includes anger, fear, curiosity, instinctive reactions; but one personality might possess an angry temperament while another an amiable temperament, meaning that in the one anger is aroused quickly and by a large variety of situations; in the other it is rarely aroused and by few situations; in the one anger is excited whenever the individual is thwarted, opposed or wounded in his feelings; in the other the response is never or rarely anger in such situations, but perhaps sorrow, or pity or some other feeling. One is said to be quick to anger, the other slow to anger. Hence the character of the one is said to be "Good tempered" the other "Bad tempered." Yet any personality will manifest anger in some situation. "Likewise with fear; one person reacts with fear to all sorts of threatening situations; another rarely or to but few. One is said to have a timorous or apprehensive character the other a brave or bold or "sandy" character. Yet everyone manifests fear in one of its phases (apprehension, anxiety, etc.) in some situation. There is no personality born without the fear instinct.

"In the domain of acquired dispositions personality includes the ideals "sentiments," desires, points of views, attitudes, etc., of the individual in respect to life and the environment. These being acquired by educational, social, and environmental experiences largely differ in every individual. Some become common, or substantially common to all or many. Those that are peculiar to or acquire a dominating position and influence in the personality play their part in distinguishing the character of the personality from that of another. They tend to determine the modes of thought as intellectual processes. They characterize the *quality* of the intelligence (its content) rather than the *degree or capacity* of the same. On this side, then, character is the resultant of the dominating acquired dispositions of the individual and is manifested in his intellectual traits. But both innate and acquired traits become organized by experience into a functioning whole.

"Thus a personality may exhibit a character recognized as idealistic, altruistic, selfish, egotistic, social, anti-social, etc., according to what ideas, "sentiments," morals, etc., have been acquired by experience. It is in these respects that he is largely the product of his education and environment, the influences of which have also organized his innate dispositions (instincts, etc.) with his intellectual processes.

"Character from the point of view of behavior may be regarded

as the characteristic modes by which the personality of a given individual, or the average individual, reacts under given conditions to environment.

"The study of personality necessarily resolves itself into a study of behavior, for only by behavior are we able to recognize the dispositions and other traits of personality, both those which are characteristic of the species and those which are peculiar to the individual. In this statement the term behavior is used in a comprehensive sense to include both the reactions to the environment which can be objectively observed and those mental reactions which can be only introspectively noted. Within the meaning of environment must be included the body as well as the outerworld. In the last analysis all mental behavior, as well as bodily behavior is a reaction to the present environment, though it may be conditioned, modified reinforced or inhibited by acquired dispositions representing past experience."¹

The above clarification justifies our use of the popular terms, intelligence and character in the following pages as conveying the exact meaning of these terms, i. e. *capacity* or *degrees* of intelligence and *quality* of intelligence respectively.

It is clear that intelligence and character are not distinct and separate entities in functioning; but on the contrary are inextricably blended and interdependent in each personality. Notwithstanding their functional interrelationship,—inevitable since they are products common to the same cerebral cortex, the manifestation of intelligence i. e., thought, is distinct from and dissimilar to the manifestation of character i. e., behavior. Intelligence tests which neglect an investigation of behavior may fail, then, to demonstrate not only character, an important part of personality; but they may fail also of a complete demonstration of intelligence, since its quality is omitted. An investigation of character as an integral field of inquiry in addition to the determination of intelligence age level, however, enables the evaluation of the whole personality—presuming freedom from mental disease.

There may be then conceivably, a variety of culture and training adapted to modify personality, the effects of which are manifest especially in those mental processes which we call intelligence, and a culture or training of the personality the effects of which are manifest especially in character. To illustrate: a definite course of culture well adapted to improve memory capacity has as its most obvious effect

¹Dr. Morton Prince: Unpublished "Notes."

the making available of an increased store of memory impressions, i. e., intelligence data. The effect on character of this amplified memory capacity while not negligible is less obvious and direct and constitutes an incidental character modification of minor importance rather than an essential change therein. On the other hand a personality which discontinues the practice of some deleterious habit of indulgence, gambling for instance, contributes materially to his excellence of personality quality, which we call character, without necessarily modifying intelligence directly or essentially. In the latter illustration intelligence is involved in the decision to cease gambling; but the action of ceasing is energized by volition, impulses serving continued self denial and other dispositions or forces depending upon the quality of personality, which is character, rather than on the degree or capacity of personality which is intelligence. Therefore a comparison of correct measures of intelligence taken before and after the character change cited would give little or no indication of the quality of personality (i. e., character) modification effected. Likewise the acquisition of a new increment of intelligence data, while showing clearly in any adequate relative exposition of intelligence capacity, would hardly be revealed by relative character studies.

In personality evaluation, especially that of personalities of adolescent or adult physical age, something other and more than "Mental age level" must be determined; since personality is something other and more than that part of mentality which may be expressed in terms of "Mental age level." "Intelligence age level" is a better term, since there is thereby indicated more clearly that capacity or degree of intelligence attempted to be demonstrated by intelligence tests and expressed in terms of age level or intelligence quotient.

Our point is not that personality studies have omitted the consideration of action or behavior in investigations of mentality; but that sometimes such characterial traits as have been investigated have been interpreted and reported as though they were indices of intelligence. Faithfulness in investigation and clarity in case presentation demand that characterial traits or dispositions be recognized and reported as such.

We know two adult, sane personalities which may be contrasted. The one, A is a confidential clerk who has forged his employers signature at least three times. He passes "adult" intelligence tests with credit, I. Q.: 1 plus. His literary and aesthetic tastes are commendable and his thought mechanisms as discovered by tests and also as de-

cerned in ordinary social and business intercourse are efficient and trustworthy. In conversation he does not justify forgery; but admits it is never justifiable. Yet his love for fast living, fine clothes, automobiles, costly companionship, etc., have occasioned his failure by forgeries, executed most skillfully. His knowing, inventing, associative and reasoning capacity is not at fault; but his capacity for resisting, for denying himself gratification and for acting on the promptings of his own good foresight are at fault. His weakness is one of behavior and in the field of quality of personality, i. e., character, and is not one of thinking, and so in the field of capacity or degree of personality, i. e., intelligence.

The other personality, B is a farm "chore boy," an imbecile as determined by intelligence tests, I. Q.: .39, whose conduct record is good. He milks cows, carries wood and water, etc., under direction and is in his contracted sphere of activity an economic success. He is well disposed toward his environment and habitually reacts acceptably to stimuli within his comprehension capacity. His weakness is a paucity of knowing, inventing, association, thinking, etc., a failure in the field of capacity or degree of personality, i. e., intelligence, and not one of behavior in the field of quality of personality, i. e., character. The findings of intelligence tests only in these two cases are that A is of at least ordinary intelligence while B is an imbecile. The findings of character study only are that A is legally an offender, an economic parasite and a social menace, while B is law abiding, a producer and no menace. Consideration of both fields of inquiry affords a far broader and more illuminating and therefore true basis of comparison than is available from the consideration of either field alone. In fact, conclusions drawn from investigations in either field to the exclusion of the other are misleading.

The revolutionary and wonderfully successful public school propaganda of Mathew Arnold, which is the outstanding factor in completing the development of the staunchness of British character, in his and succeeding generations may be cited as an example of what may be accomplished with normal personalities, in the formative period, by directing personality development along the line of worthy character evolution in addition to building intellectually.

At this point McDougall's conception of character as an organization of the controlled and modified instinctive forces appearing in ideational life may be quoted in justification of the position that, in any adequate personality study, investigation of character may not be ignored; but is to be recognized as an integral field of inquiry.

"The innate tendencies to thought and action . . . constitute the native basis of mind."

"With the development of ideational life (or in physiological terms, of the cerebral cortex) the various instincts become organized in systems and, with the development of self-consciousness, all these become organized and duly subordinated within the all-comprehensive system which is the character of the individual man."

"The organization is affected through interrelation of the cognitive dispositions with which the affective or conative dispositions of the instincts have become connected through experience."

"I have attempted at length to show how the instinctive forces are modified and controlled; but without ceasing to be the mainspring of all our thought and conduct, through becoming organized in the one system which is character."² The investigation of behavior or conduct is essential then, in personality studies, which aim to be complete.

That part of mentality which intelligence tests may be expected to measure includes the knowing, inventing, imagining, recalling, combining mechanisms and others of which these are types, all closely related to thought processes; but not closely related to conation or doing; or, from another view point, all closely related to behavior; or, again, all closely related to concepts, but less closely related to instincts, impulses and motives. One showing no mental disease may know and freely admit that "To steal is base," yet theft may be a repeated behavior experience of that personality. Intelligence tests are not expected to demonstrate the fact of theft experience in such a case; though the truth might be developed incidentally. No adequate character study would overlook the fact cited, however, even though the case history omitted its mention. Certain, at least, of the processes of personality being, then, more or less susceptible of investigation and demonstration in terms of intelligence age level, (such as perception, memory, imagination), what of the part of personality which acts or resists, that which is closely associated with and dependent upon conation, volition, impulses, instincts and other innate or acquired instinctive dispositions or forces which eventuate in or modify behavior? The latter mental factors or processes, and others like them, are not susceptible of correct demonstration in any intelligence age level presentation for they are in a dif-

²Wm. McDougall. "Instinct and the Unconscious." *The Brit. Jour. of Psy.*, Vol. X, Part I, November, 1919

ferent category and are not closely related to intelligence. The instinctive dispositions taking part in behavior are essentially those of character i. e., the sum total of predominating dispositions or tendencies, or the characteristic modes of reaction to environment. Character then is the field of investigation in which, if search be made, the organized instinctive forces eventuating in behavior may be found.

That functionally, capacity for thinking is intimately and etiologically related to degree of intelligence rather than to character and that quality of thinking and action or behavior is similarly related to character rather than to intelligence is shown by the fact that responsibility for behavior is referred, popularly and psychologically as well as in jurisprudence to character, but not to degree of intelligence, except to the extent of knowing right and wrong. One is not arraigned for illegal or ill chosen thinking; but for the illegal or ill chosen behavior which may be due to ill chosen thinking. Ill chosen thinking whether it be threatening, obscene or antisocial is beyond attack as such both legally and popularly; but the transition of thought into action involves those systems of instinctive tendencies and the play of those predominating forces which are intimately associated with character and it is the action or behavior eventuating from the transition that may be attacked legally or adversely criticized popularly.

"Whether rightly or wrongly the fact remains that the fundamental idea of punishment and amenability to the administration of justice is that of teaching the importance not essentially of selecting behavior wisely but of wise performance. No attempt has ever been made to *enforce* better thinking and deciding, excepting to induce it as a means to the end of better behavior. The enforcement of acceptable behavior, however, is and always has been the fundamental purpose of civil and criminal jurisprudence. This places behavior under control of volition, i. e., acting or executive volition rather than selective or judicial. Instinct and reason have always taught that responsibility rests proximately with the acting province of mentality and with the thinking province only remotely. In actual daily usage one may think whatever he pleases, so long as his acts do not contravene established legal or social forms. When an offender is of demonstrably limited responsibility because of intelligence defect, there may be judicial clemency; but when he demonstrably deviate in character only, there is no clemency, only the more sternness. The law imputes responsibility then, not for the selection of acts, but for their performance and in so doing tacitly recognizes something which we have termed character

deviations as susceptible of improvement, in effect, demanding an approach in behavior to that emanating from character rectitude."

"Current popular evaluation of personality is not confined to an estimation of intelligence only. Character is consciously or unconsciously regarded not less consistently, as the measure of excellence and efficiency. We actually demand certain character standards or at least social behavior standards in the personalities selected for various activities; in employees, soldiers, business and professional men and especially in all teachers, statesmen and moulders of public opinion. To illustrate the distinction between these two functions in our thinking; we respect the loyalty of the feeble-minded mother to her children when it is exhibited; but we deplore her inevitable neglect of their welfare. It is not the intellect but the character of our efficient enemy in Germany that we despise. And to carry our illustration one step further, while it is our own intelligence that dictates our instinctive contempt for the Kaiser's principles, the dictation would be void without our character to express and enforce it."

"No demonstration of the fact is needed that character development and deviation progress far beyond the close of the formative period of normal intelligence development. Thus the two are not co-extensive. This is true also to a limited extent in cases of arrested intelligence development. In these cases character development or deviation is not wholly circumscribed by the deficient intelligence; though by no means independent thereof. Character modifications continue to be reflected in behavior after intelligence development ceases. Furthermore, it is to be observed that in the earlier years of the formative period, which we have been accustomed to regard as terminating at about the age of twenty, character formation lags behind the normal development of intelligence; while in the later years of the period the developmental progress of character is much more pronounced and significant, outstripping and overshadowing the progress of intelligence in the evolutionary years at and after the close of the formative period. Studies of feeble-mindedness in physical childhood are concerned with intelligence rather than with character. Personality studies of adolescents and adults on the other hand find the more potent and significant factors to be character or social behavior, since character is not yet sufficiently developed; while the adult is responsible unless the intellect can be arraigned. The reason for the observed failure of "Mental tests," adapted to childhood mental ages, to prove adequate to the classification of adult feeble-mindedness, doubtless lies in

the transcendent potentiality of character factors in the later developmental period."

"It is conceivable that cases of physical age well within the formative period and of an intelligence capacity not far short of integral could largely overcome the effect of certain character deviations and build up a more nearly ideal character. In fact, our sometimes well founded confidence in the reformation of certain criminal cases finds herein its justification. And it may be found that the inexplicable economic success of certain cases apparently hopelessly handicapped by feeble-mindedness becomes clear on the appropriate distribution of the handicapping and enabling factors between the rudimentary intelligence and the still developing character."³

Sociologically and economically inimical personalities are such primarily because of their behavior, since it is action essentially not thought, except incidentally, which brings a personality into contact with others. At the very basis of all sociologic endeavor for the correction of the pernicious activities of the parasitic elements of population is the identification of inimical personalities and the determination in each of the possibilities of restoration to economic usefulness. The inimical potentialities of those showing deviations in the field of character only are far greater, both relatively and absolutely, than the potentialities of those showing intelligence defects; and the inimical potentialities of those showing both intelligence defects and character deviations are still greater. The problem of correctly identifying and classifying these aberrant personalities for incarceration, or, better, for treatment and retraining, is evidently a most important and pressing sociologic issue. Attempts to transform an inimical personality into an economic unit must be directed primarily to the correction of the behavior disorder by modifying character. Intelligence defects are irremediable or nearly so, while character deviations are susceptible of improvement while plasticity remains. Successful efforts to modify behavior in inimical personalities then should be directed logically to the rehabilitation of character and preferably while in a plastic state i. e., as early in life as the predominance of inimical instincts or tendencies can be determined. All personality studies undertaken to determine the possibility and method of behavior modification are more vitally concerned with character and its many kinds and degrees of deviation than with intelligence and the measurement of its efficiency.

³"Character as an integral Mentality Function;" the author; "Mental Hygiene," Vol. II, No. 3, July, 1918.

No means of accurately measuring and numerically scoring character deviations has yet been devised; but neither are the varieties and degrees of departure in mental disease susceptible of numerical scoring or mathematical treatment. Case studies of mental disease are nevertheless available and the treatment of mentally diseased patients proceeds successfully, resulting in the sociologic restoration of some, at least, of the afflicted.

Since the only available means of identifying inimical psychopathic or paracitic individuals for restoration to sociologic and economic usefulness is by individual personality studies which include an investigation and evaluation of character as well as of intelligence; and, further, since the restoration of these personalities is to be secured only through a modification of behavior and behavior may be most effectively modified by educating, redirecting and fortifying character—the essential spring to behavior—while plasticity remains; it follows that any adequate personality study must investigate character. Character study then is entitled to recognition as a categorical entity; since it is an integral field of inquiry having its own locus, mechanisms and event, and as such, in personality study, is distinct from the study of capacity or degree of intelligence and from mental disease.

HOW "STIMULUS-AND-REACTION" EXPLAINS LEVITATION DREAMS

WITH REMARKS ON THE WILL TO INTERPRET

BY LYDIARD H. HORTON

FOREWORD—The following report brings to its close a series of letters and papers printed in this Journal since 1913, and dealing with the problem of validity in dream interpretations. The conclusion presented is that great accuracy in dream-study can be attained through the so-called Inventorial Technique. This permits one to reconstitute the dreamer's train of ideas in the objective terms of "situation and response."

MY dear Dr. Prince:

I need hardly say to the editor of the Journal that has concerned itself so long with Abnormal Psychology in its developments that a large portion of the offerings in this science are purely tentative in character. And I have recognized always that the admission to your columns of a great deal of disputable theory about the subject of—let us say—dreams has been due to your desire that all phases of abnormal psychology should be considered, and that the *Journal* itself should not stand for any particular province in the field of mental anomalies.

I remember your comment upon my earliest papers which gave a theory of dreams different from that of psycho-analysts, when you said to me: "Your theory may be true or not true, but the interest of the matter lies in the fact that after it has been proclaimed that there was only one way of interpreting a certain type of dream, you should have come along and showed that another equally plausible interpretation could be put upon the matter."

Recently, you followed up this line of thought in commenting upon the last paper, entitled "Levitation Dreams, Their Physiology," saying, "In reading your paper it seemed to me that after all you did not exclude the psycho-analytic interpretations. Would it not be possible by some hook or crook to turn the meaning of the 'flying' dreams, which you have cited, into 'symbols' of a sexual idea?"

In answer, I may say that all the dreams I have cited, beginning with the first paper submitted to you in 1913, could be re-interpreted by either Freud's Reductive Method (reducing everything to funda-



INVENTORIAL RECONSTITUTION OF THE TRAIN OF THOUGHT

The dreamer had gone to sleep under the influence of two sorts of past events: Pictured in the circles above. The one was the actual experience with a dead snake which led to some discussion of the distinction between

dangerous and *non-dangerous* snakes, presented as hinging on whether the heads of the snakes were *square* or *round*. The distinction was taken in by the child with a literalness, almost geometric. This furnished the particular *snake* images and represented *degrees of danger*. The emotional element and the motive for action in the child's dream was supplied by the pent-up desire to draw water at the well, in emulation of her older sister, under the tutelage of the maid. The evening before, she had been literally debarred from this task (as she is shown in the picture, weeping at the gate). Also on many occasions before she had been forbidden to go near the head of the well because of its doubly dangerous character: (a) the rotting boards that were so laid over the stone around the well that they could trip up the child in her play; and (b) the round head of the well itself into which she might fall. Recently, however, this situation had been improved by building a safe well-top almost flush with the ground, consisting of new timbers laid together in a *square* with an opening to pass the bucket. This new situation is the minor danger and is represented by the square snakes. The well was "not so dangerous" now. The bucket, however, had still to be passed through the opening which was large enough for the child to fall through. *Handling the bucket* then was represented by the dangerous variety of round-headed snakes. And the analogy is completed by the fact that these snakes had little handles on their heads and that father manipulated them with sticks. These features of the explanation were fully validated at the time (see *Journ. of Abn. Psychology*, March, 1914).

In the text we set ourselves the task of showing that this dream, like the others, could be willfully re-interpreted as an eating dream, which it certainly was not. This is to warn against explanations of dreams based upon the Will to Interpret.

mental "sex" impulses) or by Jung's Constructive Method (assuming a constructive forward-looking fancy on the part of the dreamer) seemingly with more or less plausibility in each instance.

But if I have, in this half dozen papers, urged my own "reconstitutive" method of interpretation, it is because, through actual experience in psycho-analysis, I have found an immense peril to common sense lurking in the technique of the two other methods. It is not that their authors necessarily employ harmful or dangerous devices in dealing with their patients; but only that their successes, whatever they may be, are successes of personal skill in spite of, rather than because of, their questionable theories and the easy-going practices which they too unguardedly advocate.

This seems due to the fact that a Will to Interpret, a desire to make-something-out-of a dream, has led to a really go-as-you-please style of interpretations, not consistently related to anything properly called the true meaning of the dream. It is against this go-as-you-please method, this *quod libet* attached to the explanation of a dream, that I aim to protest by showing that there is such a thing as a standard or criterion by which one may judge the correctness of an interpretation.

This standard of interpretative rectitude is no more than the straight reconstitution of the train of thought.

The reconstitutive method affords, in the matter of dreams, a criterion similar to that which is offered in French criminal jurisprudence by the "reconstitution of the crime." We should cast aside the German conjecture of Professor Teufelsdröck of Weisnichtswo, and affiliate our methods with the painstaking labors of the French detectives. These are familiar to American readers through Edgar Allen Poe's exposition in the "Murders of the Rue Morgue" and the "Mystery of Marie Roget"—quite as worthwhile in their way as his "Gold Bug." (Compare the reasoning of Thomas Carlyle's German Professor in *Sartor Resartus* with that of Poe's French detective.)

TRACING THE WAVE OF THOUGHT

In fine, as I have stated earlier, the true pursuit of dream-study should be to trace the wave of nervous excitation from its origin in a particular set of nerve stimuli and to show how the several images in the dream-panorama were produced under the influence of the group of stimuli, acting in couple with the pre-existing state of mental preparation ("facilitation" or "Bahnung"). All these elements can usually

be found and accounted for, if one prepares an adequate inventory of the items of the dream.

Out of the eleven dreams that I have submitted as illustrations of this method in the "Journal of Abnormal Psychology," six of them contained such symbols or ideas that they would unhesitatingly and off-hand have been adjudged "sexual symbols" by any well-informed psycho-analyst. As to the flying dreams, the psycho-analyst might judge them to be sexual or non-sexual, according to his disposition of the moment, subject to his study of the "free associations." But the appearance in one of them (Angry Sheik and Warm Clothing Levitation Dream) of the love-and-jealousy motif would have inevitably suggested to the psycho-analyst that a sexual manifestation was the fundamental incitement to the levitation fancy. In the rest of the flying dreams the belief in an underlying sexual element would have had to be obtained purely from pre-conceived ideas, not to say prejudice. Too many psychoanalysts reach conclusions on the basis of the following syllogism:

"All flying dreams are sexual;
This is a flying dream.
Therefore, this dream is sexual."

FASCINATING ARTIFACTS

Although this *a priori* reasoning may seem unjustifiable from a common-sense standpoint, yet it must be remembered that it is actually the prevailing method of psycho-analysts to reason in this way. For instance, when I was first psycho-analyzed by a distinguished pupil of Jung in Zurich, he employed the following reasoning: "Freud has shown that all dreams are wish fulfillments. You have had this dream; *ergo* it contains a fulfillment of one of your wishes." Thereupon he proceeded to cross-examine me and to obtain associations so as to extract from me the confidential information about various wishes that I might have entertained. He quizzed me very vigorously and obtained admissions which I was certainly not willing to make to the first comer, nor indeed would make to anyone except in a confidential interview such as the psycho-analytic séance affords. And he did lay hold of wishes that did seem to explain the dream—for a time.

My examiner's use of *leading questions* and my suspicion that there was here some sleight-of-hand, creating the semblance of a *révelation* emanating from the dream-analysis led me to study very carefully each item of the long dream that I had presented to him. In this

effort, I simply fell back upon the Inventorial Method that I had used years before Freud was heard of. I had acquired this method through so-called "logical analysis" as taught in the French schools, and later had adapted it to the study of the *methods of authors*, finally to the dissecting of Lewis Carroll's masterpiece, "Alice in Wonderland." More recently, it had proved invaluable in the study of flying dreams, and related mystical fancies.

This inventorial analysis simply *reconstitutes* the mental steps by which a given sentence, conversation or phantasy has attained to its total structure of ideas. Applying this to the dream, which had been so brilliantly "explained" by my psycho-analytic examiner, I found a totally different history, bearing no essential relation to the facts that had been drawn out exegetically by the professorial seer, from this particular dream. Through my inventorial analysis, there stood revealed to me the utterly unsuspected possibility of exactitude in stripping complex dreams down to a skeleton of stimulus-and-response. This encouraged me to go on with the inventorial analysis; and to develop standardized forms to safeguard the Interpreter of Dreams lest he be inclined to let the "Will to Interpret" carry him far afield.

THE FABRICATION OF MEANINGS

The Interpreter should not let his free play of fancy rival that of a dreamy or drowsy subject. In gathering information about trances and those phenomena of the Unutterable Revelation (which Professor Leuba has recently called attention to) I had met with the "Will to Interpret"; for the subjects under trance conditions, gave to their scant impressions and slight corporeal disturbances most extraordinary meanings. The case of ecstasy and "spiritual" healing, as inventorially analyzed in my last published letter to you, reveals to what lengths the "Will to Interpret" can go when the subject tries to make something out of novel kinesthetic impressions and unfamiliar sensory changes. Such changes as "blood vessel sensations," however slight they may be, furnish the basis for extraordinary fancies of power, locomotion, levitation, as I have described.

To what extent the Will to Interpret can be carried among persons engaged in scientific pursuits, my contact with the psycho-analytic school has taught me best. Psychoanalysts (while not asleep, but very much alive to their professional business) can be "entranced" in the sense that many of them have literally fallen in love with the psycho-analytic method of thinking through the well-known Uebertragung for

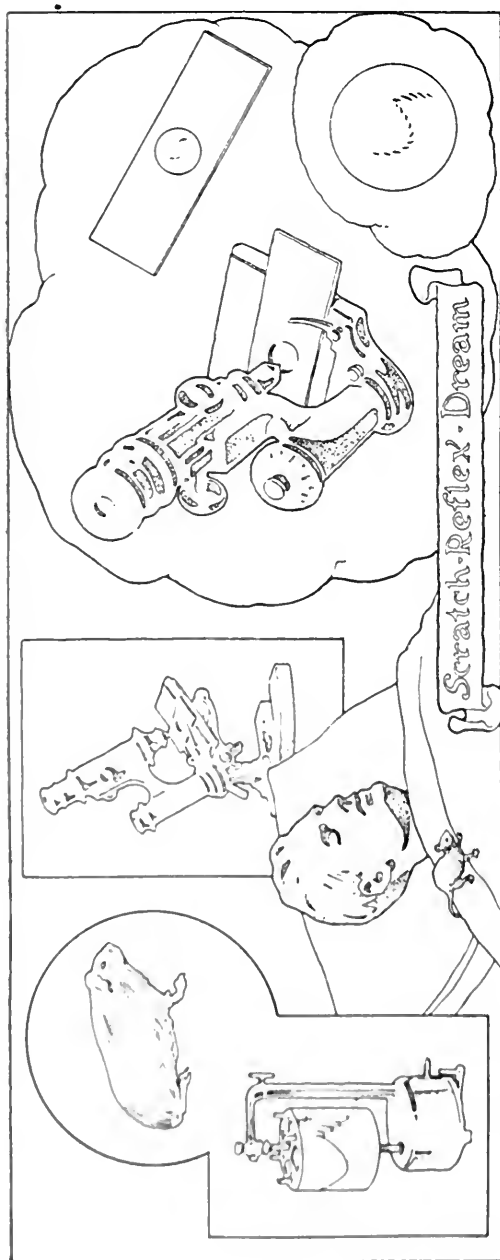


ILLUSTRATION SHOWING DIFFERENCE BETWEEN PERCEPTION AND APPERCEPTION IN SLEEP

The dream is initiated by scratching sensations on the dreamer's ear produced by a mouse which was emerging from the bed clothes. The memories that were still semi-active in the dreamer's mind are indicated within circles and squares, while the cloudy outlines represent the three successive mental pictures that resulted.

The striking thing about this dream is that the least relevant image appears first, followed by a second which approximates to a perception of reality while the third is a scientifically concrete representation of the scratching movement of a small mammal. In the dream it forms a visual picture analogous to the tracings of the scratch reflex on the smoke-drum of the laboratory kymograph.

This dream suggested to the writer in 1912 a solution for the problem of apparent time inversion. The next dream (Door Slam Dream) is intended to illustrate this mechanism with more exactitude.

Freud! In 1909, finding such a bias as this among students of dreams and seeing it applied so largely throughout the psycho-medical field (the developments in which had been familiar to me on their practical side since the days of Charcot) I decided to check up the conclusions that were being tossed so freely into the atmosphere of psychological medicine. Accordingly, I apprenticed myself to psycho-analysts in clinical work.

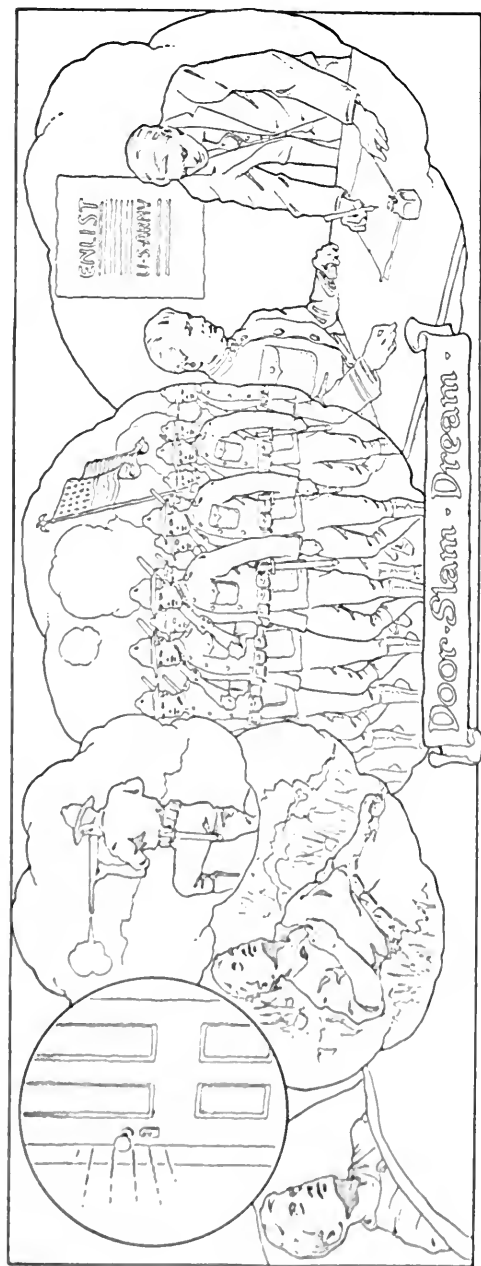
As a result, I became rather proficient in psycho-analytic interpretations myself and have acquired, by dint of practice, entire facility in treating any dream or outside event as a sexual phantasy. I learned (what Bellamy and other writers in this Journal have shown) namely, how easy it is to "run into the ground" the Freudian method of dream interpretation, especially when it hinges on so ordinary an appeal as that of sex interest. I mean that the *state of interest* aroused by references to the sex function usually is sufficient to hypnotize an auditor and throw him off his guard; analytic sleight-of-hand becomes possible; or to revert to slang, literally *any old interpretation* can be *put over*, depending on the "Will to Interpret."

We all know that there is in Psycho-analysis an *a priori* assumption that a sex meaning should be looked for rather than (say) a meat and drink significance. Let us try, however, to interpret each of the dreams in the series of my papers since 1913 as an eating-and-drinking proposition.

FORCED GASTRONOMIC INTERPRETATIONS

In Number One, we have interest in snakes, as drawn in the picture. We can "easily see" that the dreamer, a little girl who lived on a farm near the sea-shore, was thinking of *eels* and that the little handles on the heads of some of them are indicators of *cooking* utensils, such as Father used to cook by, over the camp fire; further, that the square-headed snakes carried a symbolism of *slices of bread* which were used in making *sardine sandwiches*. ("Corroboration": There were frequent picnics at this summer place, and the children were constantly entertaining projects which were doomed to postponement or disappointment owing to the weather: thus causing suspended wish-fulfillment!)

This offers a plausible basis for an interpretation of the dream phenomena, in the meat and drink sense. The eating and drinking



MECHANISM OF TIME INVERSION ILLUSTRATED

This is a modern picturization of Dr. Abercrombie's illustration, which caused him to raise the question of *time inversion* (Dr. John Abercrombie, 1830). To obtain the proper succession of events as they appeared in the dream the scenes should be followed from right to left, ending with door slam which, in reality, awakened the dreamer. On the other hand, the succession from left to right represents the order in which the actual mental images were subconsciously aroused. There is no evidence whatever that this dream had anything to do with food; but it can be seen from the text that almost any set of mental images can be plausibly twisted into an allusion to one distinct topic—if we follow the peculiar method of the Freudian school. Illustrations of the Freudian method, as applied to the flying dream, itself, will be found at the end of this letter to Dr. Prince. Meantime it is well to bear in mind that all these dreams (like the one pictured above) are capable of a more refined analysis than is customarily given. This analysis, as will be seen from further examples, tends to displace eventually the interpretations that are based on more far-fetched symbols. The reconstitutive method should enable one to "fetch back" only those memories that have been fetched far by the dreamer's mind. Cases like Dr. Abercrombie's are by no means rare. The mechanism of time inversion figures prominently in everyday life: not only in the amusing lapses of speech which are known as Spoonerisms (after an English dean of that name) but also in errors of the typewriter and of the linotyper. The daily newspapers bear ample evidence of the latter; they depend, like the rest, on the premature action of the nerve path owing to its being "facilitated."

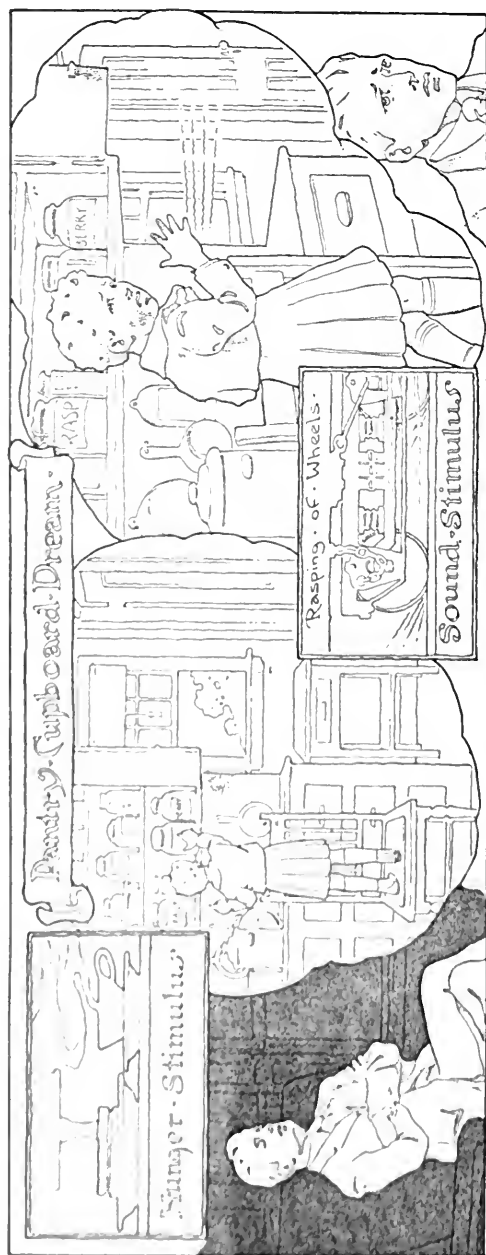
question figured very largely in the summer life of this child and her several sisters. They were continually going off on blue-berrying expeditions or to look for mushrooms or to get chickens or to buy their provender with Father at the distant village. Why couldn't the picture of father killing snakes (eels or other fish) be symbolic of an eating-and-drinking wish associated with the desire to personate Father as the manipulator of pots and pans at the picnic? And at the same time there is a conjoined association with the drawing of water at the well, which of course was always a preliminary of the picnic, as a supply usually had to be taken along. Surely this interpretation is as plausible as any sexual one; but it lays stress on purely gastronomic motives. (The real reconstitution is given under the picture).

FOOD MEANINGS ATTRIBUTED

Passing to the second instance, that of the "Scratch Reflex" dream, I do not need to force the meaning very far. The *microscope* is associated with the examination of foods and the determination of their purity, and the *scratch marks* on the slide may be simply taken as marks of the can-opener with suggestions of contamination; and, thus, the whole dream attributed to anxiety concerning the partaking of food. The *bacillus botulinus* is suggested by the sausage-shaped microscope barrel. To finish off the interpretation and dismiss it with one of those flourishes that carry conviction, we may remark that the dreamer of this particular Scratch Reflex phantasy, belongs to a family very inclined to interest in food! Thus an important element of character study takes part in the play of phantasy in this dream! Let us say that the dreamer was warned against the defect of his family and, since the dream, has been watching himself to avoid gormandizing; which introduces a desirable element of Sublimation!

Surely this is as plausible as any sexual interpretation could be, but very similar in style to many of the less convincing snap-judgments of psycho-analysts.

As to the Door Slam Dream, I have so far given no mock sexual interpretation of my own as I deliberately did for the Scratch Reflex Dream when published. For it was used to illustrate the mechanism of time-inversion rather than the wishes or desires of the dreamer. But every psycho-analyst knows that the *firing of a shot* has a very marked sexual significance, implying anything from advances toward the opposite sex to special perversions. I could myself cite dreams in which this "symbol" certainly had a sex meaning. Therefore, I suppose it



DREAM ILLUSTRATING THE SUMMATION OF STIMULI BELOW THE THRESHOLD OF CONSCIOUSNESS

In order to understand how seemingly irrelevant images are aroused and thus form the dream, it is necessary to understand the principle of "approximation," illustrated by the Scratch Reflex Dream and the principle of time inversion illustrated by the Door Slam Dream.

While the latter instance represents reactions to a single and uniform stimulus, the present illustration carries the conception of apperception and time inversion one step further. For here we have two known interacting cues stimulating the apparatus of memory. The almost unbelievable accuracy of this mechanism is illustrated by the successive evocation of images distinctly related to both cues. First, the imagery is related to *hunger* with no suggestion in the picture of *sound*. Then there is a second stage where the *sound* is represented to the child as a horrifying screech suggestive of *terror*. Finally there is the man's waking to the realization that the train's wheels are *rasping* upon the curve.

The whole dream results from the interacting cues. The visual imagery at each step of the dream was evidently determined by the relative intensities of the two stimuli according as the dream progressed. In the original article, this ratio was represented as an index of relevancy and accompanied by a geometrical diagram showing the summation of stimuli that called forth in turn each phase of the dream. The same sort of exactitude is to be found in the levitation dreams.

would be possible, by sufficient ingenuity, to interpret Dr. Abercrombie's famous instance of the Door Slam, as if there were a sex meaning involved. The only certain thing is that this dream was a reaction to a real noise—a door-slam simulating a shot, and suggesting a fanciful experience of enlisting in the army *before* the shot was fired.

Now, from the eating-and-drinking standpoint, it is not difficult to recall the fact that *enlistment in the army*, not only in present-day Bolshevik Russia, but in past days, has been regarded as the one resource of those who were unable to feed themselves; and the predisposition of Dr. A.'s subject to dream of enlistment when he heard a door-slam may have been emotionally determined ("Affektbetont") by some anxiety regarding the *provisioning* of his family and his thought that, at the worst, he could relieve the family budget by enlisting in the army!

This is not much more tinctured by the Will to Interpret than dozens of dream interpretations that have come my way, in the course of associating with the practitioners of the psycho-analytic school. I do not, however, in this invidious statement refer to the leading exponents of this school.

APPERCEPTIVE ERROR IN REAL HUNGER DREAM

We come to the next dream (see picture) The Pantry Cupboard Dream. This has already been used for a demonstration of the Reconstitutive Method. It was found to be a dream occasioned in part by an unsatisfied appetite for food, in part by a noise. Therefore, I do not need to attempt a travesty of my own interpretation.²

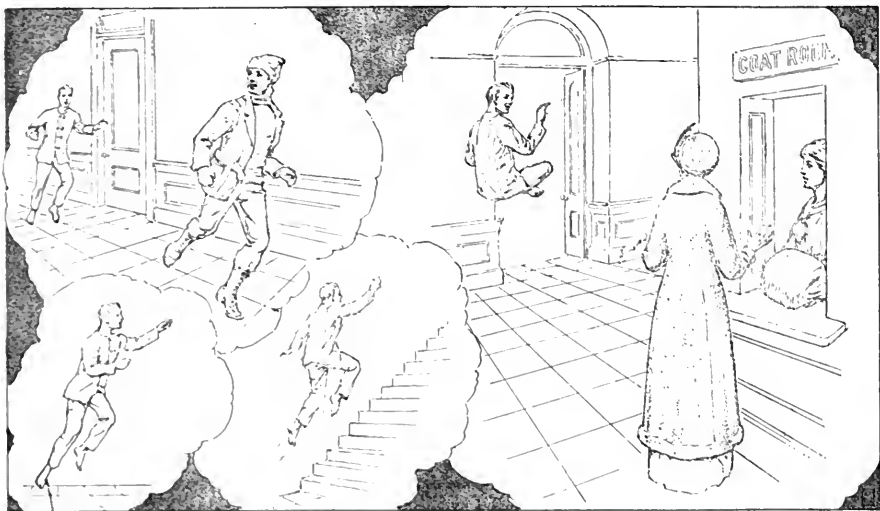
Coming next to the levitation illusions, can we not suppose that they are in part dictated by the desire to be free from the limitations of bodily *avoirduois*? Indeed, no less a psycho-analyst than Dr. Isidor Coriat says that dreams of flying represent *the wish to be free* and the *desire to do as one pleases*. These wishes being safely attributable to anyone, this augury is too Delphic to stand.

From our preconceived standpoint of eating and drinking, however, we may go on to say that the flying dreams "represent a tendency to shake off the flesh."

"Oh that this too too solid flesh would melt."

Obviously the desire is to reduce adipose tissue and still to eat all

²A la Freud, the opportunity might be taken to say that the male dreamer, having pictured himself as a child with skirts on, must have a complex of bi-sexuality—a thoroughly permissible guess not quite justified by the Reconstitution.



WARM CLOTHING DREAM WITH LEVITATION FANCY

The Warm Clothing Dream came to the writer's notice in 1916. It first suggested how dreams of Insufficient Clothing might be correlated with Levitation dreams. As the drawing stands in the picture above, it represents only a dream of Insufficient Clothing passing into a dream of Levitation. This would of itself alone not suggest the underlying physical state. But a clue was found in the so-called Angry Sheik Scene. It appeared in the Warm Clothing dream when the dreamer was pursuing "warmly clad Smith," as a mural drawing chalked on the wall at the spot near the running figure of Smith.

The curious feature of the Angry Sheik scene is that it embodies mental responses to all the different sensations of chill. Also it reflects the sensations that belong to the vasomotor reaction following the stimulus of cold skin. The great significance of this clue lies in the fact that the sensations of cold and warmth, picturized by the Angry Sheik Scene, immediately preceded the fancy of levitation. This suggests the sensory link between cold and levitation as being the vasomotor reaction.

The parallel in the text clarifies this.



THE ANGRY SHAKE SCENE AS PART OF THE WARM CLOTHING DREAM

that one wishes. Here a didactic digression might be in order, touching the prevailing acceptance of corpulency among people of the near East, in distinction to the Occidental world.

So far, I have given illustrations to show to what extent one is really captivated by almost any interpretation that seems to resolve the intellectual confusion presented by the dream narrative. All that is expected of the average dream-reading is to relieve the sense of incongruity, somewhat as in the satisfaction of having loose pearls strung together.

As I have outlined it, this *a priori* method could be used to fasten upon dreams of flying the implication of being eating-and-drinking wish fulfillments. But this farcical aspect has perhaps been exploited enough, and it is time to show in what way the psycho-analytic explanations actually fall short as applied to "levitation."

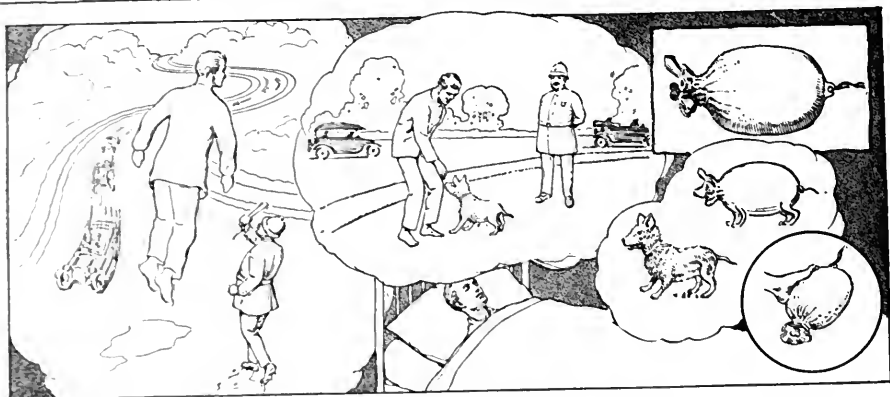
A TEST CASE

The crucial instance that could serve as a pivot around which the discussion might properly turn is the Angry Sheik Scene, pictured in the last paper. For convenience, "cuts" of the dream are reproduced here under the title of the Warm Clothing Dream and the Angry Sheik Scene. Taken in combination, they furnish a well-nigh indisputable paradigm upon which further interpretations by the present Reconstitutive method could be modelled.

In the Warm Clothing Dream we had perfectly definite evidence of sensory stimuli accounting for the origin of the dream, which was set up physiologically by the adrenal-sympathetic nervous system—as if by the injection of adrenin itself. In the course of the dream, mental responses were forthcoming which corresponded to the characteristic biological responses of the organism to the circulation of the adrenal secretion. Let us roughly draw a parallel between the physiological aspect and the mental imagery:

We tabulate each reaction as it would impinge on the sensorium or on the arrival platforms of the brain, and each corresponding mental response, to wit:

SENSORY ASPECT OF STIMULUS	MENTAL OR IMAGINATIVE RESPONSE
<i>Chilliness</i> , i. e. cold skin	Coldness of lady, haughty demeanor.
<i>Appetite for warmth</i>	Jaeger (friezed)blankets, camel's hair, Costume of prophet Hosea (Clue: prototype of same was dreamer's bathrobe of turkish toweling.) Flowing robes in general.



LEVITATION DREAM NUMBER TWO

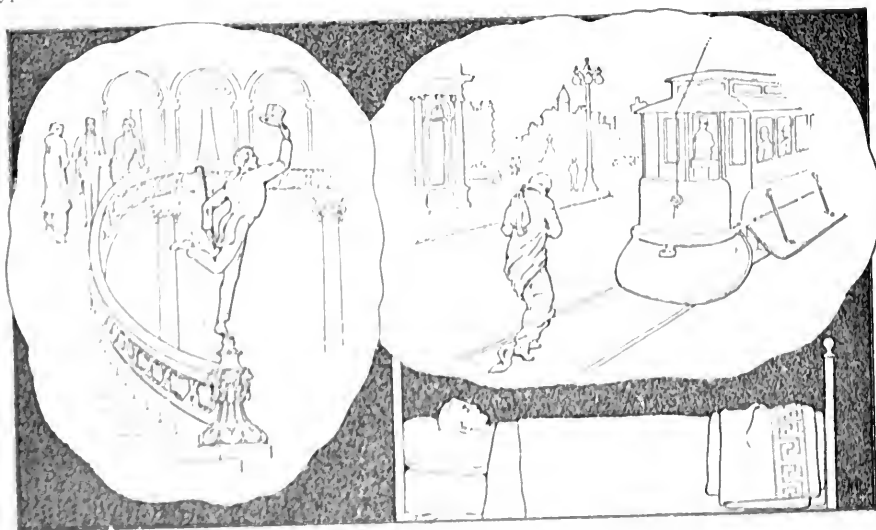
ILLUSTRATING POSSIBILITIES OF "RECONSTITUTING" DREAMS

Both of these dreams contain characteristic imagery (i. e. apperceptions) reflecting the bodily state during sleep. In both cases the course of the phantasy of levitation is modified by sensations obtained from the foot. This lends particular interest to these two examples as traversing the conception of Ellis and other writers to the effect that aviation in dreams takes its start from the absence of foot-sensations.

It will be seen from the pictures that the idea of levitation or lightness may exist coincidentally with foot sensations, leading to the suggestion that some generalized bodily sensation is the essential determinant of the flying dream. Yet foot sensations may affect the extent of the sense of detachment from earthly contacts.

In each dream, the second scene represents the *pied-à-terre*, or, literally as we might say, the better-grounded perception of the foot-sensations:—In dream No. 2 it is a hot-water bottle which is fancifully apperceived as a dog (mechanism of Analogy); and in Dream No. 3 it is the pressure of the blanket which is reflected as an embarrassment of locomotion (first it is a pedestal, then an impediment)!

Again in both dreams, *vehicles* reflect disturbances of the circulation. In No. 3 the rhythm of the heart is reflected in a staircase; in No. 2 the rhythm of the blood-vessel sensations is reflected in the sinuosities of the parkway. These two kinds of annunciators of circulatory rhythm may be looked for in all dreams of the levitation type.



LEVITATION DREAM NUMBER THREE

Goose-flesh sensation

Sand of the desert.

Increased cold sensation formulated as freezing

Pictorial plays on the word "frieze," in three ways, as follows: a) Frieze

design on the camels' saddle-blankets; b) frieze-like recurrence of a camel and driver, with reduplication of the prophet Hosea; c) Mural character of the decoration, as patent in the dream picture. This is a sort of allusion to Sargent's famous frieze of the prophets in the Boston Public Library.

Total Significance of Combined Picture on left hand side: FRIGIDITY of the body surfaces.

Heart-beats

Plunging of horse ridden by sheik.

Lung expansion as if from adrenin injection

Depiction of actively exercised animal, with mentally "exercised" rider.

Vasomotor warmth

Heated aspect of animal and rider.

Shiver or muscular tremor

Shaking of the fist of rider.

Diffused sensations typical of adrenin stimulation

General attitude of anger.

Sense of comfort from the anti-chill response

Depicting of a) warm garments enveloping the characters on horseback, b) a comforter in the shape of a bride clinging to the Angry Sheik.

Other adrenin stimuli causing sense of exhilaration

Sense of triumph or exploit, associated with bride-capture.

Total Significance of right-hand picture is CALORITY associated with the warming of body surfaces and associated co-ordinated reflexes. The continuation of this response to cold gives rise to

Generalized vasomotor suffusion of blood bed in surface of skin

Idea of detachment from definite contacts.

Modified kinesthetic sensation and loss of pressure discrimination

Belief that one is levitating in defiance of gravity.

Joint sense retained through actual joint tension while drawing up limbs

Fancy of stepping up into air and drawing limbs under.

Residual sensations from right arm

The levitating dreamer waves right hand airily instead of shaking fist as angry Sheik did.

This is enough to show the point; but the parallels in such dreams can be made as deadly as one could hope for . . . deadly to the type of "interpretation" of these dreams, now current.

EROTIC ASPECTS OF THE ANGRY SHEIK SCENE

No one can deny that love-spite and bride-carrying are "erotic." But these circumstances do not make the explanation of the dream a sex one, in that the analysis of this dream has anything to do with love as a primary motive. The particular imagery in the Angry Sheik sequence does not retroactively imply anything in the nature of a sex origin for the dream of levitation. In sum, sex image is present, but not primary. Any other view is putting the cart before the horse. Yet one is conscious of being very much on the defensive at this point in the argument.

I have chosen precisely this example on account of the false and superficial appearance of sexuality that it offers. Let me make it clear then that this is a case where the arousal of physiological phenomena that have nothing directly to do with sex may produce mental imagery that happens to be linked in memory with thoughts of love. (The cart follows the horse.) There is no such connexion between the active cause of the dream of levitation and the love motive as there is between the word *love* and the word *dove* which are strongly united not merely by sound association, but by poetic symbolism.

In sum, the levitation illusion in the Warm Clothing Dream is produced by circulatory and muscular changes. The phantasy of love in the desert (in the form of the Angry Sheik scene) is due to linkages of memory merely combining the separate physiological experiences into a "resolution." The several items of the dream, which are very direct responses of the mind to the physiological cues, may be spoken of as *annunciators*, in the sense in which hotel bell-boys speak of the device that registers a call from a certain room as a figure appearing on a board. Thus, the levitation sense in the Warm Clothing Dream is an annunciator of grateful blood vessel sensations and kinesthetic repose; the shaking of the fist announces shivering of the arm muscles; the fury of the sheik announces the vasomotor changes characteristic of anger. (See Hobbes' theory of the emotional cycle beginning at one pole in waking life and at the other pole in the dream.)

NON-SPECIFIC CHARACTER OF "LEVITATION" PHYSIOLOGY

If this reasoning is followed closely, it will be seen that the sex element in the Angry Sheik scene does not represent a sexual cause for the dream as a whole. Nor does the sensation of flying, in its own nature, carry the erotic suggestion. There is nothing specific in the physiological state to call for love ideas. This is proved statistically

by the frequency with which the same physiological conditions are apperceived in a different sense by the dreaming mind. Analyzing these bodily conditions, we find outstanding features that usually attend intense and violent emotion, being even earmarks of the active phases of several definite instincts. That is to say, not peculiar to love but biologically featured in rage, or in fighting, in hunting or in similarly violent exertions. Indeed, the Angry Sheik picture, as a cartoon, embodies all these aspects.

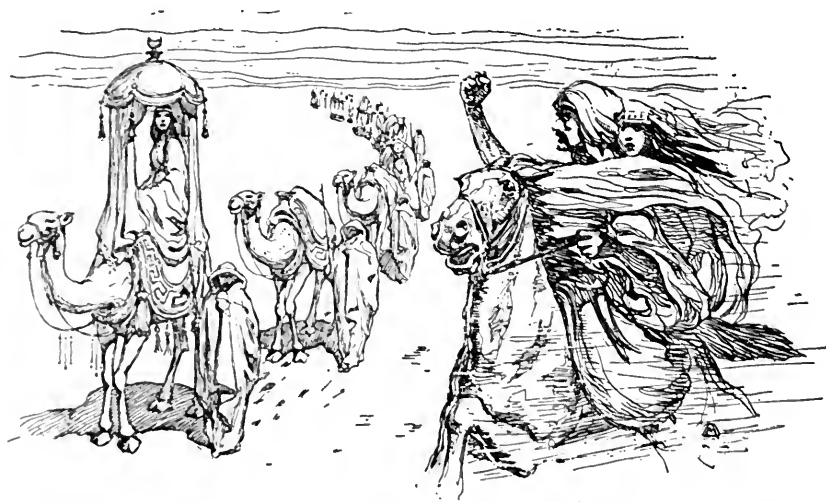
How did it happen that this dreamer was reminded of love-spite by the resurgence within him of this particular physical disturbance? Simply because the beating of the heart, shivering and shaking and other manifestations of adrenal-sympathetic action had been at one time affiliated in his mind with some particular instance of courtship, in literature or in actuality. Thus the mental switches were set for a love-scene.

On the other hand, this same dreamer, somewhat earlier, under circumstances less favorable to romantic associations, had a dream of hunting, as a result of "sleeping cold": the events of the day before had been sufficiently tintured with an interest in outdoor life and hunting to turn the dream that way. Yet the same circulatory manifestations were present. But then the switches were set in favor of a different instinctive reaction.

RECAPITULATION OF "LEVITATION" THEORY

Our explanation is now that certain non-sexual physiological processes are set up in sleep and produce the flying sensation. If in some cases sex fancies are present in accompaniment to the aviation phenomena, they are secondary, incidental associations, recalled by the physiological state—which may have been present in an actual experience of love emotion. Further the flying illusion per se is a mental reflex to ascertainable functions of the adrenal-sympathetic system. This stimulated activity is neutral and not necessarily affiliated with any one instinct more than another. For instance, *steps* signify really *heart beats* and are only sure annunciators of sex experience provided "one's heart going pit-a-pat" happens to have been exclusively related to love—which is impossible. Needless to say, it was definitely ascertained by the dreamer at the time of this dream that there was no erotic feeling or any sex excitement in play. We conclude that there can be no necessary connexion between flying fantasies and sex phenomena.

Further, the failure to observe hitherto the relation between the



THE "ANGRY SHEIK" MURAL DRAWING FROM THE WARM CLOTHING DREAM

EXAMPLE WHEREIN PSYCHOANALYTIC INTERPRETATIONS ARE MISLEADING

This particular instance, a single pictorial scene taken from an actual dream of "flying" or levitation permits us to visualize the methods of the Vienna and Zurich schools of Psychoanalysis.

This dream picture was composed by the dreamer's fancy in exact obedience to stimuli or cues playing upon the sense of the dreamer (as detailed in the text). This picture is a preliminary sign of the physiological reaction that subsequently created the illusion of levitation. The rest of the dream also contains important annunciators of the same physiological conditions. Yet these all-important determinants of "levitation" would be entirely overlooked in applying either the Reductive Method of Freud or the Constructive Method of Jung (as made clear in the text).

Instead, the mental imagery would be regarded as a composition of the dreamer's free fancy. And the dream of which this is a part (and a clue-giving part) would be judged by Freud in a preconceived (sexual) sense. The quotations that follow explain the trend of either school and will help to justify the effort made in the text to show the danger of absurd conclusions when following these methods.

Freud says: "It is the wild playing ("Hetzen") of childhood which dreams about flying, falling, vertigo, and the like repeat, and the voluptuous feelings of which have now been turned into fear. . . ."

"I have therefore good reason for rejecting the explanation that the condition of our dermal sensations during sleep, the sensations caused by the movements of the lungs, and the like, give rise to dreams of flying and falling. I see that these very sensations have been reproduced from the memory with which the dream is concerned—that they are, therefore, a part of the dream content and not of the dream sources. ("The Interpretation of Dreams," p. 239).

Earlier, "What do these dreams signify? A general statement on this point cannot be made. They signify something different in each case as we shall hear: only the sensational material which they contain always comes from the same source . . . they refer to the movement games which have such extraordinary attractions for the child." (p. 238).

This is the exact opposite of our thesis: that the source of these dreams lies in vasomotor and kinesthetic sensations and that the imagery of typical levitation dreams annunciates this source and not the latent meaning supposed by Freud.

According to Jung, "the typical adherents of Freud's school have come to the point of interpreting—to give a gross instance—almost all long objects in dreams as phallic symbols." ("Analytical Psychology," p. 308).

levitation illusion and its definite physical basis has given an opportunity for "Freudian enthusiasts (ignorant of the real mechanism) to interpret this dream, to the mystification of students, in the go-as-you-please manner. It is this mystification that I want to protest against by offering a caricature of the way in which a too cocksure psychoanalyst can proceed to disregard the physiological meaning of the dream and to fabricate something entirely different but plausible.

This brings me to the Reductive Method of Freud and the Constructive Method of Jung, as contrasted with the Reconstitutive Method. The pictures are labelled to correspond. An inspection of them and a careful study of the notations inscribed thereunder will show how easy it is to "fake" a sexual explanation on the basis of precedents furnished by the theories and examples of Freud and Jung. We must learn to descry the danger that arises from too slavish an adherence to their methods.

Let us take an intensive look at the Angry Sheik picture.

THE FREUDIAN EXPLANATION FOLLOWED

The most plausible way to utilize the Freudian method would be to divide the picture into two halves as shown in the cuts. On the left half is represented the picture of docile camels and priestlike camel drivers, hooded and obviously not men of vigor and action. The woman in that section of the picture is haughty and distant. The whole left-hand picture obviously suggests a deficiency of those virile qualities which are associated with the male emotion of love. It is sex activity at the minimum. This then—we may infer according to Freudian principles—is the condition of the dreamer! He is not active or successful in courtship. On the right, however, we see the fulfillment of his wishes. The vigorous animal spirits of the horse, the erect carriage, the definitely uplifted arm recall the possession of the most virile powers. The exposed head and the war-like visage of the man contrast with the hooded camel drivers, the passivity of the ones emphasizing the activity of the other. The patient necks of the camels

Jung's own method as a modification of Freud's is in consonance with his statement that "After all, for us therapists it is a practical and not a merely theoretical necessity which leads us to seek for some comprehension of the meaning of dreams. In treating our patients we must for practical reasons endeavour to lay hold of any means that will enable us to train them effectually."

Neither method aims, apparently, to make a true reconstitution of the dream process. The Science of Mind is the poorer for the lack of strictly scientific efforts in this new direction.

contrast with the stallion strength of the horse's fore-quarters. This obvious analogy can be carried out to "show" that the dream is one of despair on the part of the dreamer as to his deficiency of sexual activities. The left hand represents the non-fulfillment of the wish, and the right hand represents the power for fulfillment.

Now it shall be our duty to soften the somewhat rank sexualism of the foregoing explanation by adopting the constructive method of Jung.

THE JUNGIAN EXPLANATION FOLLOWED

We observe a group of quiet animals, forming a caravan led by men of passive bearing, who are the attendants upon a woman of haughty demeanor, evidently the prime personage of the party. This implies a submissiveness, a subserviency to woman, an absence of that primacy in relation to the feminine sex that is the normal desire of every man. Here we have one woman with many male servants. The multiplicity of the men and the interminable length of the string of camels is significant. There is an element of monotony suggested and unconscionable repetition.

We reach the conclusion that the dreamer is contemplating his own situation in its unsatisfactory aspect. But he feels that his position in life should not be one of servility, of secondariness to the female sex, not one of likening himself to an animal being ridden, thus placing himself on the same footing as the docile camel. The vista of the long caravan suggests his sense of dissatisfaction with the past. He finds it long to look back. (For every vista and every character in a dream may be a re-echo of the dreamer's subjective feeling.)

If we turn to the picture on the right we see the prospective outlook, the anticipation of the future. The Sheik on the right is a leader among his people, he is a warrior, a man of the desert, free to do as he pleases. He shows his contempt for the regime of femine autocracy, typified by the caravan. He himself will not take a subordinate place in relation to a woman. He has his own woman clinging to him, sitting on the rump of his horse. How different from the condition of the camel drivers! It is his manly power expressed in the primacy of the successful male capturing his mate.

It is to be inferred from this dream (we may say *à la* Jung) that the dreamer is contemplating some advancement from his condition of secondariness and subserviency. He wishes to exhibit the many virtues associated with the mating impulse. He wishes to be under his

own leadership and he craves to be distinguished among his fellow men as one who is successful with women. The dreamer has evidently been suffering from an inferiority complex and is anxious to deliver himself from its bondage. So much for Dr. Jung's type of explanation. [This is not mere travesty but utilizes items of information about the dreamer's personal history.]

THE RECONSTITUTIVE ASPECT

Now this may or may not be true; but the point is that this phantasy, known as the Angry Sheik Scene, is simply interjected into the Warm Clothing Dream, which is a levitation dream, and its explanation is not the least bit forwarded by taking the Angry Sheik Picture or any other imagery in any social or sexual sense. On the contrary, by taking the Angry Sheik Scene as a piece of visual imagery delineated under the compulsion of essential physiological *motifs*, we convert it into a clue to the real state of affairs. Below the *patent* meaning, we descry a *sub-jacent* meaning. Instead of vague conjectures which might be equally applicable to the dreamer (or to the man sitting next to him in the clinic) we can obtain a definite parallel between physiological stimulus and mental response. That is achieved by the Reconstitution, which alone can give proper weight and proportion to the various guesses at the dream meaning.

Now, in conclusion, to answer your original question, I must admit that it is always possible to juggle the sex interpretation in such a way that it will seem to cover the bill of particulars. This is exactly what you have always objected to in the prevailing methods of sexual interpretation. But the difficulty is to find a favorable case on which to rest one's argument against the "Will to Interpret." It seems to me that Levitation Dreams of all sorts furnish the proper debating ground. Their sex-significance can be maintained only by remaining in ignorance of what the Reconstitutive Method shows to be their physiological source and course.

It seems to me a great mistake to give scientific credence to methods of dream interpretation that are not capable of explaining the rise and development of the dream, but that only base their claim to utility on being able to trace out some remote and irrelevant implications, however true they may be. This is, at the most, what has been accomplished by the psycho-analytic "explanations" of the Flying Dream. Hence I may say that the psycho-analytic offering is inadequate from the standpoint of pure science. But from the practical standpoint, I

can see that a great deal can be accomplished in clinical work by extracting "talking points" from dreams, even though they be faultily analyzed. I have taken the liberty of illustrating the "talking point" methods of Psycho-analysis by applying them to dreams that I would myself explain differently.

Thus you will see how well I can imagine that any Levitation Dream can be explained in a sex sense by the Reductive or by the Constructive Method; but *should it be?*

Yours very sincerely,

LYDIARD H. HORTON.

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given stimulus evokes trial percepts which are *approximations*: coming closer by degrees to the correct response.

The Apparent Inversion of Time in Dreams—Explained by the Principle of Apperceptive Delay; Journ. of Abn. Psychology: April-May, 1916.

Presents diagram explaining the Abercrombie dream as result of lagging response of the correct memory association, i. e. "neurogram." Apperceptive error in dreams shown to be often dependent upon time relations rather than any special motive or important controlling idea.

On the Irrelevancy of Dreams—In the Light of The Trial-and-Error Theory of Dreaming; Journ. of Abn. Psychology: August-September, 1916.

Presents Pantry Cupboard Dream as showing the evocation of seemingly irrelevant imagery in response to two known cues; diagram shows that irrelevancy is only apparent, as the dream is a perfectly graduated response to the cues in operation. Idea of "Index of Relevancy" developed to show mathematical features of the summation of stimuli in dreams.

The Illusion of Levitation; Journ. of Abn. Psychology: April, 1918, and June, 1918. (In form of letter to Dr. Morton Prince).

Presents collection of instances tending to show presence of a vasomotor element in experiences of levitation, as indicated by the ordinary stigmata of peripheral vasomotion. Case of "mental healing" described and inventorially analyzed to show psychic reaction to physical sensations. Various apperceptions of subjects described as founded on "blood vessel sensations." Shows levitation dreams Nos. 1 and 2.

Levitation Dreams: Their Physiology; Journ. of Abn. Psychology: August, 1919.

Attempts unified picture of the bodily changes underlying the illusion of levitation by showing that in addition to the signs of vasomotion, there are other indications of increased heart-beat, freedom of the lungs, and muscular tremor, all of which bear striking resemblance to the characteristic physiological responses produced by the adrenal secretion. The unified view lies in the fact that the bodily changes out of which the levitation fancy seems to originate, are not accidental and scattered responses, but represent a definite set of nervous readjustments dominated by the sympathetic system. The now well-known functions of adrenin in stimulating the sympathetic nerve fibres are cited to show a parallel action of cold upon the skin, as in the case of Insufficient Clothing dreams followed by Flying dreams.

Note 1, referring to page 15.

For the Unutterable Revelation, see Prof. James H. Leuba's forthcoming book on Mysticism. He read a chapter from this book before the American Psychological Association, Harvard University, December 31, 1919. The statements contained therein seem entirely consistent with the present writer's views about the unutterable revelation, expressed in the article on "Levitation Dreams: Their Physiology," printed in the August number of the Journal of Abnormal Psychology, (distributed during December).

Note 2, referring to page 26.

For Hobbes' circle of emotion see original edition of *Leviathan*, p. 6, as

part of Chapter II: "Of Imagination." Also see restatement of Hobbes' circle in his *Human Nature*, Chapter III . . . "I believe there is a *Reciprocation* of Motion from the Brain to the Vital Parts, and back from the Vital Parts to the Brain; whereby not only *Imagination* begetteth Motion in those Parts, but also Motion in those Parts begetteth Imagination like to that by which it was begotten."

Note 3, referring to paper as a whole:

The Will to Interpret (which is a phrase used by Royce as a heading in his "Christian Ethics") has received an unusually clear and judicial estimate at the pen of Adrian Stephen, in the April number, 1918, of the *Journal of Abnormal Psychology*.

PERSONALITY FROM THE INTROSPECTIVE VIEW-POINT¹

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PERSONALITY has been considered from most every imaginable angle it seems and a great deal of light has been shed upon it during the past two thousand years but the greatest progress toward a comprehensive understanding of personality may be said to have been made in the past forty years. In 1876 the first laboratory for the experimental control of the study of the thought processes was founded by Wundt and out of this small beginning has grown a far-spread system of psychology, not developed in the "arm-chair," so to speak but under scientifically controlled conditions. Such a psychology will appeal most certainly to the intellectual type of mind and will appear to the emotional type of mind as utterly far from the truth as possible. To be sure, it is not beautiful, it does not appeal to the esthetic sense because it demands an intellectual attitude, an attitude which is quite the contrast of the esthetic attitude. The intellectual attitude does not forbid us the use of the imagination but when we have arrived at our imaginative conclusion the intellectual attitude requires that we check up our stock, our position, with reality, with the outer world, as presented to us through our senses. Naturally it believes in the reality of the matter given to us through our senses and it believes that we are able to arrive at the truth by using the matter given us through our senses. The esthetic attitude on the other hand is satisfied when the imagination satisfies the feelings and the emotions. It naturally believes that this form of satisfaction is the counterpart of truth. Such truth is akin to revelation and like revelation leads to rich esthetic feelings. With the esthetic attitude, introspective psychology has nothing in common.

Like every science introspective psychology has its postulates. Here again it differs from all other forms of empirical psychology. Being psychology and not physiology primarily its logically necessary point of departure is consciousness and not behavior or any form of

¹This paper was prepared for the Meeting of the American Psychopathological Association, to be held in Cleveland, Ohio, June 5th, 1920. The Meeting was postponed.

"ism." Being introspective it is individual and not animal or child or social or anything but individual. It postulates that consciousness is the reviewing subject and that the subject does not change; it is the objects of awareness that change. It is the mental processes that change and not the awareness. The subject, the consciousness, the awareness, can not do anything to the contents of consciousness; it can only be passively aware of them. The subject, the consciousness, the awareness is the knower and the self which is known is something different. The self which is known is the central, unified content of consciousness which is influenced by the world and which reacts upon the world. These are the proper postulates of introspective psychology. Of course, their ultimate truth must be decided by philosophy and the opinions of philosophy are founded on the totality of knowledge at any given time. The postulates will stand then as long as nothing is added to our knowledge which is of a nature to destroy their validity. With these postulates a system of psychology has already been accomplished and it is this system that the writer wishes to present because it appears to lead to practical results of interest to psychopathology and to psychiatry and finally of interest to every phase of human activity in which the human mind plays a part.

The first step in the presentation of personality from this viewpoint is the explanation of certain perplexities regarding the self and self-consciousness. In the first place we know ourselves as one of the objects in the environment, that is to say, by groups of sensations. We feel, however, that the self takes a role which is incomparable to that taken by the other objects of which we are aware. This feeling is given us by the fact that our self takes the central place in every experience and secondly by the fact that the body actions carry out the desires. The self is the centre of visual, tactual, kinesthetic and organic sensations which make us feel that we are the centre. The consciousness of identity in successive periods which is peculiar to each self is a function of the memory. We will see later of what stuff the memory is made. Another peculiarity is that the mind seems to be the man and the body seems to belong to outside nature. This is due to the fact that perceived and remembered objects seem to be in the body along with the feelings, emotions and volitions as well as outside in the world of time and space and so the mind can be contrasted with the body. However, the true self is not in the memory but in the functions of the attention and the will. Again, by reason of the fact that the body is the central agency which acts and which can not be affected without a

feeling of response, the personality comes to include the individual with his whole social setting.

There are two other peculiarities of the personality which appear just as simple and as little mysterious as the fore-going when submitted to introspective analysis. They are the variations of personality and the unity of personality. Personality develops steadily and it may decay but the temperament, the character and the intelligence are inborn and are developed by training. Temperament, character and intelligence can be made more tangible, more simple and more exact if we use the terms fundamental traits, types of reaction, tendencies to feelings, trained attention, rhythm of response, energy of inner activity which are themselves the temperament, the character, and the intelligencer. These latter are complex, to be sure, but are far simpler than temperament, character and intelligence, and most important, they can be analyzed to simple mental processes. They mould the outer world for the individual.

The unity of the personality is not the unity of the beautiful object and not that purposeful unity, full of meaning and promise, of the mystic or transcendental psychologies. It is rather for our present purpose the unity of a complex interplay, the various factors being the perceptions, the ideas, the activities and the inner states. The states and the activities completely control the ideas which are to arise and the perceptions which are to be admitted, and are themselves controlled by the ideas and the perceptions which have preceded in the development of the individual. This mutual interdependence is the essential feature of the unity of the personality. Each person lives in a world which his inner dispositions select and shape.

The inner states of which we have spoken are the feelings, the emotions and the attitudes. The simple feelings are given to us by our reactions. The reactions to pleasant and unpleasant are movements of approach or withdrawal and there are opposing reactions in the respiration, rapidity and character of the pulse, size of the capillaries, and in glandular activity. It is the consciousness of these reactions which we call feelings. They are not the accompaniments of the feelings; they are the feelings themselves. In the emotions also the centrifugal processes are of the utmost importance. However, in the emotions there is a factor which is not present in the feelings and which distinguishes them from the feelings. This is the presence of the ideas. Exactly the same movements may enter into very different emo-

tions and produce contrasting effects on account of the different ideas combined with them.

The feelings and the emotions have to do with the practical attitude in the sense that they seek a change in the outside world. The esthetic attitude is the most complete contrast to the practical attitude. If we assume the esthetic attitude our perceptions and ideas find us prepared for entirely different kinds of response than those for which we are prepared if we assume the practical attitude because we do not seek to change the outer world. Thus we lack the impressions which would be ours if we were to change the outer world. Every external response is inhibited; the impulse to act is felt but is detached from our own practical personality. We may call the esthetic attitude that state in which the voluntary motor fractions of an emotion and their concomitant sensory effects, are absent. The combination of the involuntary reactions plus the ideas is the esthetic attitude itself.

The intellectual attitude has for its goal the service of truth without regard for the likes or dislikes. There is an inhibition of the associations and reactions that are controlled by the personal desires. We may say that it is the combination of the voluntary actions and their concomitant sensory effects plus the ideas that we call by the name "intellectual attitude." This complex is again not a result but is the intellectual attitude itself. A reflective setting takes place with kinesthetic sensations as its fringes and by them we become aware of every variation in this setting for truth.

The activities of the personality may all be grouped under the will, the attention and the thought process. The common factor in all of these is the feeling of impulse. This impulse feeling is originally given to the individual by the first movement of the total action unified by the goal idea which is present in every voluntary action. This movement produces a change in the outer world and this change is perceived so that by training the idea of the end in view comes to take the place of the first movement and gives the impulse feeling. This is the development of the will process, of the common acceptance of the voluntary action as constituted by a change and an idea of the end of the change. The attention is of the same nature but in the process of attention the change is a shifting of ideas and not a change in the outer world. There is a consciousness of an end in view; otherwise the attention is involuntary. The end in view in every act of attention is to get more of the attended thing. Four processes are involved which may be summarized in the simple processes of sensation, reaction and

inhibition. They may be reproduced ones, bringing in the process of association, but they give the feeling of personal activity in every act of attention.

The thought process itself is no more than a prolonged attention process. It is the process of getting more of the attended thing to the nth power. The anticipation of the final situation gives the feeling of inner activity and precedes each thought as an idea with determining tendency. If thought is conducted with the practical attitude, it stands in the service of reality but imaginative thinking stands in the service of the feelings, satisfying an emotional attitude.

Thus far we have considered the personal side of the equation, the way the individual acts or reacts toward his environment. This side of the equation is simple like all centrifugal processes. Let us examine the obverse side, the means by which the outer world gets into the individual, more complex like the centripetal pathways.

The first step is the perceptions and in them sense stimulation plays the leading role. Peripheral senses and inner sense organs are the sources of these sensations. The sensations are unified into a whole, the perception, by our attitude, by our reaction. It depends on us how a perception is limited in space, time, number and manifoldness. It is this unified reaction which gives meaning to our perceptions. Associations come in and indicate relations but only enough are admitted to make a unified reaction possible. Every new shade of meaning varies the impulse to reaction.

In the perception of space the real fundamental is given in the constitution. Difference in retinal images causes automatic action of the eye muscles and the sensation of muscle movement comes to be the spatial value of the near or the remote, the small or the large object. Tactual space is related to muscle movement in the same way and finally it may be said that there is no space perception in which muscle sense is not fundamentally involved.

The perception of the passage of time, the perception of the present moment involve different functions. The former brings in the memory image, the latter is made of sensations produced by bodily reactions in any time interval, the object of awareness. The organs involved depend on the individual but the sensations are usually those of tension and relaxation and may be likened to the movements in space perception. These sensations fuse with the usual tactual, acoustical or optical sensations and give them time value. Anything which reduces these tensions shortens the feeling of the time interval.

The ideas all take their rise from previous perceptions. The chief elementary process in them is association. Memory always renews previous perceptions and is controlled by objective reality. It contains a reference to the past. Imagination is made of elements whose character is just as material as that of the memories, for the wildest imagination can not develop any contents which do not arise in earlier perceptions. But the imagination is controlled by the subjective demands; it is satisfied by the feelings, the emotions, the interests, the wishes. General ideas are composites or abstracts of memory images. They are unified and given meaning by the total reaction of the individual just as the product of any other mental function is given meaning. But they do not involve anything new or more complicated than is involved in the perceptions.

These four groups of complex mental functions involve all the mental functions of which the individual is capable. They have been analyzed to four simple mental processes which are familiar to you all. These are the processes, sensation, association, reaction and inhibition. Is not the application of this reduction apparent to you all, at once? We have seen that the sensations are essential in the simple perceptions and the perceptions of space, time and meaning as well as in all classes of ideas. We are familiar with disordered perceptions in our patients, disorders of the perception of time and of meaning, disorders of the memory, of imagination and of the general ideas. May it not be possible to determine just what sensations are disordered in the individual patient by a thorough consideration of his trouble in these fields? Will not the sensation at fault or the group of sensations at fault crystallize out of such an analysis? We have seen that association is involved in the perception of meaning and in the memories. Should we not hope to learn something of the associational disorders of our patients from a consideration of their perception of meaning and of their memory ideas? Reaction and inhibition are mutually involved in the perception of meaning, in the feelings, the emotions and the attitudes, in the attention and the thinking. The disorders of these complex functions with which we are all familiar will throw light on which modes of reaction and inhibition are at fault. And so the sensations are involved in the act of will, of the attention and of the thinking because they are the constituents of the ideas which are involved in these functions. They are involved in the emotions and the attitudes by the same means. The analysis of the will, the attention, the thinking, the emotional and the attitude disorders should then throw light on the sensations at

fault. This is the application of the reduction which must be apparent to you all, at once.

Here we have the basis, the makings, of a rational system of psychoanalysis. I do not wish to imply by this token that other systems of psychoanalysis are irrational however emotional they may be but what I would like to intimate is that the psychology underlying the anticipated system of psychoanalysis is a complete system, not one sided, not interpretative, cold-blooded, not emotional and hence should be free from the faults of an incomplete, one-sided, interpretative, warm-blooded, emotional system, though Heaven knows it will doubtless have faults peculiar to itself.

Unfortunately it has not been possible for me to make the practical application of this view of the personality. Moreover, such a practical application to the problems of the actual patient would be of little value yet for the reason that we have no means to check up our results with the autopsy table. Some method for examining large sections of the brain and other body organs must be devised which will be rapid and practical from the stand-point of cost per brain. At the present time the examination of microscopic sections of the total cross-section of the brain takes about 3-6 months and costs about \$100.00 for each brain and the method of taking numerous smaller sections is impractical because it is so time consuming, in addition to the circumstance that one is never certain that one has taken his sections from just that part of the nervous system which is most affected or which is the seat of the pathology giving rise to the symptoms shown by the patient.

However, two steps in the direction of the solution of these knotty difficulties seem to be possible. In the first place we may hope to point the direction for the selection of tissue for study from a consideration of the symptoms of the patient himself. We should be able to say whether his chief lesion is in the sensory mechanisms and if so, in which levels. We should be able to say whether the lesion is in the reaction and inhibition mechanisms and if so whether it is in the voluntary or involuntary part or both and if in the involuntary part whether it is in the cardio-respiratory, gastro-intestinal or genito-urinary section of that. We should also be able to say whether it is vascular or other forms of smooth muscle or whether it is chiefly glandular.

The second great step in the direction of a solution is the rearranging of some of our ideas concerning the internal function of parts of the brain especially. This is possible if we consider the logical de-

ductions which can be made from introspective psychology with regard to anatomy. The chief rearrangement which is possible results from a greater attention to the part played in the mental life by the internal sensations, that is to say, by the sensations which result from action and those organic sensations called pain and lust. The arrival platforms for these sensations, especially the kinesthetic sensations, have been partially mapped out for the cerebral cortex and their course in the spinal cord is fairly well known. But no consideration appears to have been given to the logical necessity which we are under of connecting these arrival platforms with the arrival platforms of the other sensations. This connection I have postulated as an implication of introspective psychology and have called it the sensori-sensory neurone. This neurone is logically the one involved in connecting the sensory results of the reaction process with the sensations aroused from the outside world. It is then an essential constituent in the arc by which our sensations are bound into a unified whole and given their meaning. It is essential in the normal feeling tone of the sensations, in the emotions and the attitudes. With respect to this neurone, then, we have the basis for expecting pathology from the productions of our patients. This should limit the amount of work now necessary in determining the location of the essential pathology in any given case and it should eliminate the uncertainty under which we now labor when we make our selection of regions to be especially thoroughly investigated.

The next rearrangement which can be effected also results from logical necessity, the necessity that sensation arriving at its platform in the cortex shall have a channel of discharge. The difficulty so far has been met in terms of function by calling the impulse traveling along the neurone from the cortex, a centrifugal impulse. Why hesitate to call the neurone in the cortical arrival platform a sensori-motor one? It is sensory in the direction that it is necessary for the consciousness of the sensation which it subserves and it is motor in the sense that it connects to lower motor neurones. Call it intercalary if you will. It is intercalary in the same sense that the spinal cord neurone of this name is intercalary. Call the spinal cord neurone of this name sensori-motor if you will. It is sensori-motor in the same way that the cells of the cortex of the brain with the exception of those in the kinesthetic areas, are sensori-motor.

This last rearrangement is a point of little value or meaning if taken by itself but it has its real significance when taken into consideration with the third rearrangement which I would request you to turn

your attention toward; that is, the composition of the association pathways. A consideration of the association process has purposely been left until this point in order to show that it has nothing to add to our knowledge in the way of pathways in the brain. The older anatomists, basing their conclusions on the older psychologies, have postulated certain association pathways in the brain. I would submit that these pathways are associational in a sense but not in the sense usually assumed. I take it that they are sensori-sensory and sensori-motor; in other words that they are composed of the fibres whose cells of origin are in the cerebral cortex of the kinesthetic centers going to be distributed to the cells of the rest of the sensory cerebral cortex and of fibres whose cells of origin are in the cerebral cortex of the rest of the sensory areas going to be distributed to the motor nuclei, cortical and subcortical in location.

The case for lesions in the white matter in the psychoses is then a very strong one. If you will turn your attention to your memory images of the location of the sensory areas of the cerebral cortex and to the structure of the white matter as you have learned it you must see at once that these two sorts of fibres, the sensori-sensory and the sensori-motor, must be intimately mingled with one another in the white matter. Is it expecting too much if we should hope to find pathology in the white matter or expect to find it in cases with disorders of the mental functions outlined above?

This is personality from the introspective view-point. The outlook which it offers over an otherwise barren field, hitherto, is the only reason that it should receive your consideration.

THE PSYCHOLOGY AND TREATMENT OF INSOMNIA IN FATIGUE AND ALLIED STATES¹

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AMONG the commonest of all neurotic symptoms is insomnia. In fact it occurs so frequently that it is often regarded as a normal variation of habit rather than an evidence of disease. We can recognize at least two types of this disorder—an organic and a functional. The latter is the one to which I wish to direct your attention to-day. Its features are familiar to you all. There is difficulty in getting to sleep and when the patient does drift off, he is disturbed by troublous dreams and easily awakened by chance sounds. The only sound sleep is apt to occur when he ought to be leaving his bed. The other type is that of early waking, which is probably associated with vascular changes either anatomic or functional, inasmuch as it occurs predominantly with advancing age. Psychologically the two are distinguishable in the difference of attitude toward the trouble. The patient is obsessed with his symptoms if they are neurotic, while the organic cases are indifferent or make a virtue of their early rising. I do not claim that these are the only kinds of insomnia. There may be other varieties and, of course, sleeplessness is the natural result of many unpleasant thoughts and sensations. The abnormality I am discussing seems, on the surface, to be more or less primary. Whether the insomnia of anxiety states is ever occasioned by such factors as are to be discussed is a problem for the future.

It is probably wrong to say that this disorder is purely functional. In fact my attention was first directed to the problem in cases of concussion with consequent fatigue. The symptoms, however, are due to psychic mechanisms and these interfere with the natural recuperation from fatigue. The study is, perhaps, not unimportant as an example of the combined action of mental and physical factors.

To avoid misapprehension it may be well to define the term "fatigue" as my use of it may be arbitrary. Continued exertion without

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rest leads to a condition of weariness, a desire to rest, a vague malaise and a slowing of mentation. Often there is a muscular excitability, leading to the well-known "jumpiness," which is probably organic, inasmuch as it may exist independent of anything suggesting the neurotic. If uncomplicated this state progresses to what I term "exhaustion," where we see physical collapse or deliria result. This exhaustion shows an extraordinary recoverability with sleep which may last for twenty-four hours or more. After such a rest a man may be perfectly competent both physically and mentally, showing how little sleep is necessary for purely somatic regeneration. If opportunity for sleep is denied, however, or it be secured in meagre snatches, insomnia develops, and the patient, no longer capable of the normal readjustment with rest, gets into a chronic condition where varying neurotic reactions are frequent. A well-defined neurosis is infrequent unless the patient has been abnormal before. This indefinite neurotic state is not unlike that seen in many convalescents from influenza. The symptoms of this condition constitute what I term the fatigue syndrome.

During the day the patient is fatiguable, often suffers from headaches, and is slow and inaccurate in his thinking. Perhaps the most striking feature is restlessness. There seems to be an unnatural alertness both in body and mind. He not only starts but is startled by sounds, his limbs are ever in motion and his distractible thoughts are never at rest. Irritability is common, although he may be able to repress it. In the morning weariness and dulness is extreme, slowly he wakes up as his restlessness increases, but in the afternoon his energy seems to peter out again. If opportunity offers, he may doze for short periods, although unable to sleep if he plans to do so. At night he feels exhausted, often sleepy, until he prepares to go to bed. Once there the most unpleasant part of the twenty-four hours commences. He is firm in his determination to go to sleep, fearful that he may not and wonders if he can maintain his sanity without more rest. His muscles are tense, perhaps holding the head off the pillow. He tosses about listening for sounds to disturb him. Thoughts drive relentlessly through his tired head, usually centering about the work of the day or other problems. These thoughts do not progress in any practical way, but wearily iterate and reiterate the same painful details. At last he drifts into a hazy state, which is neither sleep nor waking, where vague ideas are visualized. The pictures that drift before his eyes (the so-called hypnogogic hallucinations) are senseless images that will neither stay to be examined nor go away and give him peace. He is, as it

were, in a room where all the walls are kaleidoscopes. If his days are filled with stirring incidents, as with soldiers at the front, snatches of these may pass and re-pass upon the stage reminding him of duties he feels impotent to perform. Finally sleep of a kind comes, but it is light. He tosses restlessly and any slight disturbance will awaken him to another long repetition of his hypnagogic struggle. This sleep gives little rest, for dreams repeat the tale. He is back at work again but now with all the day-time difficulties magnified ten fold. He digs a trench with a broken twig, meets the enemy's bayonet with a popgun, whitewashes a tremendous barn with a tooth brush. And if the task be not completed in an impossibly short time, unspeakable consequences will result. It is a delirium of fruitless activity. The Greeks who told the tale of Sisyphus must have known these dreams. The first deep sleep, dreamless or with innocuous experiences, occurs when the exhausted patient should be getting up. Finally, struggling with a terrible lethargy, he rouses himself, wearier than when he first lay down. Throughout the day he is obsessed with thoughts of the sleep he has not had and is often so unhappy as to consider suicide with seriousness.

So, throughout day and night, body and mind—the organism as a whole—seem to act as if they did not want sleep, which only an impotent consciousness yearned for. It is as if there were a double personality, a weak conscious one fighting against a powerful unconscious which controlled the behavior of body and mind alike. This puts the problem as a purely psychological one which is certainly an extreme attitude to assume, considering the obvious presence of organic factors. It would probably be more correct to say that the mental events express the physical ones and run parallel to them. But, as the psychic disturbance seems to prevent bodily rest, it must be an etiological factor in the whole situation and hence worthy of study and an attempt at modification by treatment.

Thus far we have considered the symptoms of this state from the conscious and objective angles. If they are to be studied psychologically we must turn our attention to the subjective side and speculate as to unconscious mechanisms as well. Let us recapitulate the development of this fatigue syndrome from this new viewpoint.

With weariness and its inevitable companion malaise, a desire to relax effort and escape from duty develops. This most natural response to a trying situation is impossible physically, morally or for both reasons. Hence rest and sleep at night are looked forward to, with more than the usual anticipation. The patient yearns for his bed

not merely as a pleasant habit but as a haven. In so far as he is physically below par, his mind is sluggish and requires the spur of conscious effort to keep it functioning at its normal efficiency. Automatic mentation is notoriously less wearing than conscious focussing of attention, hence fatigue is not only increased but becomes associated with the difficulty of the day's task. This cannot but tend towards an antagonism to the work at hand. As this may not be indulged, the idea of shirking is repressed, becoming an unconscious wish to avoid labor and reach a state of inactivity. This unconscious tendency makes itself felt when the patient is off his guard, by leading his interest and attention away from the question at hand, a process facilitated by the organic fatigue of his brain. A faltering of attention is a disturbance of consciousness and slight though it is this is probably the beginning of a psychogenic lapse of consciousness which is the core of our psychological theory. So far as the patient's awareness goes, this is the last thing he wishes, hence we find him developing a counter-tendency of absorption, even obsession, in his task. To oppose the inclination his mind has to drift, he forces his attention not only to his job but to other environmental events. This gives rise to a heightened mental excitability to external stimuli that constitutes the beginning of restlessness. In other words, weariness and an instinctive tendency to avoid that which occasions it, leads him to concentrate his attention abnormally and respond to any environmental stimuli with restless activity. Unconsciously lazy, he becomes pathologically active.

If circumstances decree that sleep be denied the sufferer, all these tendencies become stronger. As the difficulties increase in this vicious circle, the unconscious becomes more exacting in its demands. At first it was only the task which was unendurable, but soon any activity is abhorrent and the wish to escape all demands is formulated in a yearning for the Nirvana of death. This often finds conscious expression in fear of accidents or questions as to the value of life. Death is of course a great and final lapse of consciousness, hence any lack of mental acuity, suggesting the greater loss, is a signal for greater activity. The patient seeks to maintain contact with his environment by an apparently purposeless restlessness. He is in a state where anything suggestive or symbolic of death both fascinates and repels him. Now sleep is a primordial symbol of death, as all of this audience know. What it means for our unfortunate patient you can guess. On account of its symbolic significance, thoughts of slumber obsess him while his

whole being fights against every symptom of approaching asleep, a reaction biologically appropriate to its unconscious equivalent—death.

The nocturnal behavior is now explicable. Lapse of consciousness has been represented during the day only by a tendency for the mind to drift, now the patient proposes actually to give up what he has been trying all day to maintain. His unconscious demands death or complete abandonment of all earthly struggle, against which his fore-conscious (or whatever level of awareness is the home of our biological impulses) is actively fighting. The reactions of the day are consequently exaggerated. The organism is in conflict, so that the more he tries to give away to sleep the more his muscles contract, the more wildly do his thoughts circle around his normal environment and problems. Obsession with his task takes the form of ceaseless worrying over what he did, should have or might have done. Pathologically he clings to that which his unconscious would have him lose. Further fatigued, his thinking gradually regresses to a primitive type—that of images—and the hypnogogic hallucinations have commenced, with a content similar to that of his earlier thoughts. These visions are in the normal individual the natural precursor of sleep, but to the insomniac they mean that he is losing his grip. Hence they are unpleasant and he strives to rid himself of them. So depleted is his energy, however, that his efforts avail simply to prolong the period of hallucinations with insight, rather than to allow them to slip naturally over into the hallucinations of dreams. Finally, the tired body wins and a kind of sleep is achieved in which awareness of the environment is not lost, for any slight stimulus will disturb it. As universal experience attests, we sink to a lower moral level during sleep, so it is not surprising to find the wish for release from the irksome task reach a plainer expression than in waking hours. The unconscious says "Throw over the responsibility," consciousness says "Play the game." A compromise is reached in the fatigue dream, where the occupation of the day is depicted in a form impossible of accomplishment, or symbolized in a situation that is ridiculous. This seems to be the meaning of the Sisyphus task.

When the rising hour comes, the patient faces the world with this flabbier moral tone. The daily round does not seem worth while and a dulled consciousness seeks to rouse the body from bed, although all other forces aim at keeping it there. This is a new struggle, not over the preservation of consciousness but over its application. The death idea does not operate. Just as conscious effort was too weak to bring

sleep, now it cannot banish it and the sufferer sinks into a blissful nothingness or at worst dreams of "something afar from the sphere of his sorrow."

Such, it seems to me, is the psychology of the fatigue state. When these ideas were first formulated, I thought their interest almost purely academic. Although a psychic sequence could be imagined, culminating in the symptoms described, yet I considered these mental events to be rather direct expressions of a toxic state. I thought perhaps the neuro-muscular excitability (reminding one of strychnine poisoning) was a physical expression of the fatigue toxins, while the mental restlessness represented the psychic analogue, both being compensating physiological reactions to abnormal conditions. One does not hope for results in psychological treatment of drug or alcoholic deliria, no matter how manifest the development of ideas may be to the psychopathologist. Hence I acquainted a sufferer from insomnia with my theory more to observe his reaction to it than with any expectation of therapeutic results. To my surprise he responded by quickly gaining control of his symptoms. Since then I have made a serious effort to formulate the essentials of treatment, with encouraging results.

The first step has been to explain to the patient the nature of his difficulties and reconstruct the development of the vicious circle in which he has found himself confined. One who is totally unfamiliar with modern psychopathology is apt to be incredulous of his harboring a thought of which he is not aware and opposed directly to one which obsesses him. But an example from everyday life makes this possibility clear. The behavior of a bashful maiden in the presence of her lover is cited. Although thinking of him and longing for him all day, when he does appear she behaves as though he were not welcome. It is not difficult to see that she is protecting herself from an unconscious tendency to go farther than her modesty would sanction. It is mechanistically a close analogy to the insomnia difficulties, where the patient yearns for sleep constantly but by his behavior seems to reject it when opportunity offers. The analogy holds still further in that in both cases the subject is irritated by his or her reactions.

The next stage is to point out that so far all efforts to court sleep were doomed to failure, only adding to the fatigue. The patient is urged to dismiss sleep from his mind, so far as he is able, and to go to bed with the purpose of gaining bodily rest alone. If sleep comes, so much the better. If it does not, he is no worse off than he has been. If

he succeeds in giving up the idea, he will at least have saved himself from one enervating strain.

Thirdly, he is advised to spare himself from undue exertion either physical or mental. According to his circumstances his day is laid out for him with its hours for rest, and so on.

Finally, suggestions are given him for the induction of sleep through studious relaxation both physical and mental. He is told to relax all his muscles on going to bed, if necessary, going over limbs, trunk and head separately. Then he is to give up all critique as to the logic or sequence of his thoughts and let them run at random. In other words he is to indulge in free associations. Whenever he finds his attention focussing itself on one topic he must relax that attention. Soon he will begin to visualize his fancies and then the effort must be to enhance this tendency rather than to dispel it. He is told to assume a passive attitude and watch the visions pass as one watches a parade, without straining to scrutinize one rank of the marchers indefinitely. One vision must be allowed to follow another without reference to the sense or senselessness of the performance.

When these directions are followed it is astonishing how soon results are achieved. In fact one would be inclined to attribute them to suggestion were it not for the evidence of psychic reconstruction, such as the changed content of dreams record. After two or three days the patient seems to have the process of reeducation in hand and if he is a normal individual in a suitable environment can continue to improve with only occasional words of counsel.

Two cases may serve as examples of what this form of treatment may accomplish.

The first is of an officer, healthy and of normal make-up, who on March 21, 1918, was buried by the explosion of a shell, received a scalp wound and was unconscious for about half an hour. Concussion was his chief disability. Half dazed he travelled on foot, in ambulances and in trains for fourteen hours consecutively. He was then in a Base Hospital where he was operated on, merely to clean up his wound properly. He remained unconscious all that day. Following this he felt intensely tired and found his sleep disturbed. Hypnagogic hallucinations of Germans entering his room bothered him almost all night long. There was no fear but an uneasy feeling as if he were in action and ought to do something about it. With four days' rest his condition improved so that he was able to stand a twenty-four hour journey to the hospital where I saw him. By this time his sleep was no

longer disturbed by hypnogogic hallucinations of Germans, but he had visions or dreams of the Front, he could not say which. Sleep was fitful. For the next twelve days he dozed a good deal during the day while his sleep got steadily worse at night. Scenes from the Front were constantly before his eyes as he tried to get to sleep. These bothered but did not frighten him. When he did doze off he was constantly awakened by nightmares different from any I have ever met in an anxiety state. In them the death idea came to literal and not implied expression. They developed gradually. At first there were dreams of trench life in which he had great difficulty in performing his duties, he felt "paralyzed." Next came dreams with a presentment of being killed in which he felt fear. (These are like those of anxiety states.) Finally came most terrible nightmares. Shells or bombs would fall around and frighten him mildly, but soon one would land beside him, explode and kill him. He would sink down "into great depths" filled with a terrible horror and fear. The most striking feature of this dream life was that the whole cycle was repeated each night, and each time the most horrible climax was the being killed. He always awoke in a cold sweat.

An analytic explanation of his trouble was given him and he was advised to welcome the hypnogogic hallucinations. The next morning he reported the best night's sleep since he had been wounded. The period of hypnogogic hallucinations had been so brief that he hardly remembered them. He had a few dreams of trench activity in which there was great difficulty, even impossibility of accomplishing his duty. In them he was mildly apprehensive but there were no real nightmares. It was quite interesting that for the first time he felt no inclination during the day to doze, in fact he said he doubted if he could even if he tried. That night he slept well again and had no dreams of death nor indeed any in which fear appeared at all. In fact increasing normality was shown by the changed setting of his dream experiences. He was no longer in the trenches but back in billets troubled by preparations for an inspection by the brigadier. The following night his sleep was sound. He had two dreams: first, he was on a patrol and encountered a party of Germans suddenly. He felt no fear but was awakened by the surprise. He went to sleep again promptly and this time dreamed he was away on leave having a happy series of adventures in Rouen. Thus did his dream life reflect his changed psychology, for from then on his sleep was always good. Often pain kept him awake for hours, but when it disappeared he would sleep

soundly. Occasionally the fatigue dreams of difficult duty in the trenches reappeared, but they never developed into nightmares nor did they ever prevent his getting a good night's sleep and feeling rested the next day. Needless to say his convalescence was rapid.

The other case may be cited more briefly. I wish to introduce it merely to show that the same factors may operate in a civilian. The patient was a young Marine, a lawyer by profession. In civilian life he had been of an intense, energetic temperament. In the spring of 1916 he was trying some bar examinations and lost himself in his work. Naturally he had little rest and when the examinations were finished, he found he could not sleep. When he came for treatment at the beginning of June, 1918, he assured me that he had not had more than two hours sleep a night on the average for the previous two years. This was probably an exaggeration such as insomniacs are given to, but at least he presented the typical fatigue syndrome. He remained under my care for a month. After the first few days his sleep became better, averaging six or seven hours a night. After a relapse, improvement was again achieved by appealing to his pride in his will-power to rid his mind of the sleep obsession. He rose to this bait and from that time on had no prolonged periods of sleeplessness. Unfortunately in the environment of a general hospital it was impossible to regulate his activity. He was ambitious to do a real man's work and when he worked too hard he would have a bad night, although feeling well enough until he lay down. After the Armistice I had a letter from him in which he reported that after a bitter argument with a medical board he was allowed to go to the Front and lived through the whole Argonne offensive with no nervous symptoms and had been promoted as I saw from the superscription of the letter.

I offer this sketchy and incomplete work in the hope that it may lead to further investigations along this and similar lines. What these may be I would like to indicate in a few general remarks. It seems to me that, perhaps, the main virtue of this work, if virtue it has, is as an example of how psychic processes run hand in hand with physical difficulties, so that the treatment of the latter may be hopeless without the assistance of the psychopathologist. I would also like to point out that the symptoms here detailed are not all of them peculiar to fatigue alone. For instance, the extreme restlessness of the involution melancholic is, possibly, associated with ideas of death. Certainly the latter are always present in plain or implied terms, and an extraordinary number of these patients begin their illness with some months of in-

somnia, which only sinks into the background as conscious ideas of death and hypochondriacal features invade the field. A more interesting analogy is found in those cases of epilepsy who have a prolonged aura, in whom as you all know loss of consciousness is a phobia. Most of them have tricks they employ to maintain consciousness. Two features are common to all these expedients. They first try to get their minds off their obsessive fear and second they fix their attention on something in the environment in order not to lose contact with it. This latter is, of course, what the fatigue case is apparently doing with his restlessness. In fact, it was a study of the subjective phenomena of the epileptic aura which first directed my attention to this possible explanation of the restlessness in the other group.

THE QUESTION OF HYSTERICAL ANALGESIA AND THE THEORY OF BABINSKI¹

BY THEODORE DILLER, M. D.

PITTSBURGH

THAT hemianalgesia and segmental analgesia might be suggested to patients of hysterical type of mind seems very probable if not absolutely proven. But when the statement was made by Babinski that hemianalgesia in hysterical individuals is invariably produced by suggestion, unconsciously and inadvertently, though it be, by the examiner, it seemed to me this statement is entirely too sweeping and probably untrue. And yet I could find no way to definitely and absolutely disprove it until recently.

During the last year, I have examined several hundred soldiers complaining of nervous symptoms. Among these, hysteria figures frequently and there is a due proportion of cases presenting hemianalgesia. In all of these cases I made careful inquiry as to the development of hemianalgesia, avoiding carefully asking leading questions. In no case was I led to suspect that these manifestations were suggested by the examiner. But in two cases the account given by the soldiers in my examinations seems to my mind to preclude, in these cases at least, the possibility of hemianalgesia having been suggested by the examiner. The story by these two soldiers, substantially the same, was about like this: *While under severe fire, the soldier felt a peculiar numbness all over one side of the body.* Examined shortly afterwards by a physician it was discovered that the soldier had lost feeling completely on this side of the body; this hemianalgesia was present a month later when this soldier was examined by me. Moreover, when I inquired of soldiers as to whether he had heard of loss of feeling on one side of the body as a symptom of shell shock, I failed to discover a single man who knew of this symptom. And further, when we consider the ordinary methods of examining patients as regards analgesia, pricking with a needle on one side and then on the other quickly and in most irregular fashion, soldiers who have not heard of hemianalgesia it seems

¹Paper read by title before meeting of the American Neurological Society, June 2, 1920.

preposterous on the face of it to believe that it is suggested. But as I stated the clinching argument to my mind is the cases of the soldiers to which I have referred above, in which subjective one-sided sensory symptoms developed under strain and corresponding thereto subsequent examination revealed objective loss of sensation on the same side.

REVIEWS

STANDARD EDUCATIONAL TESTS. By M. E. Haggerty. World Book Co., New York, 1920.

THE MYERS MENTAL MEASURE. By Capt. Garry C. Myers and Caroline E. Myers. The Sentinel, Carlisle, Pa., 1920.

INTELLIGENCE TESTS FOR COLLEGE STUDENTS. By L. L. Thurstone. Copyright, 1919, by Carnegie Institute of Technology, Form 1481.

HANDBOOK OF MENTAL EXAMINATION METHODS. Second Edition. By Shepherd Ivory Franz. The MacMillan Co., New York, 1919.

OLD AND NEW IN MENTAL TESTS

THE TECHNIQUE of mental tests is coming into its own, and it is coming into its own in more senses than one. We mean that it is actually being put forward as a commercial proposition and being marketed by mental testers on a businesslike competitive basis. This is as it should be and it does not imply that there is any undesirable commercial quest involved. It implies simply that the various testing systems designed to estimate performances, achievements, abilities, efficiencies, or, as we would prefer to call them, aptitudes have at last come out from under the egis of academic pure science and into their true sphere of "technical applications." In a similar sense, the mathematical curiosities of the gyroscope came out of the physicist's laboratory and served a practical turn in stabilizing mechanisms of everyday usefulness. A more apt comparison would be one drawn from the history of the testing machines employed to measure the efficiency and adaptability of building and other structural materials. It is only in the last quarter century, however, that the engineering firms have been thoroughly "sold" on this proposition.

Mental testing has progressed towards its true function during the World War by reason of the fact that intelligence tests were "sold" to the recruiting organization of our "selective" army. They were made to fit the given purpose, and similar tests are still being devised on a lesser scale to meet other situations in education, vocational training, and industrial employment. To be useful, however, a test or system of tests must be "sold" to the organization using the same to such a degree that there is enough enthusiasm and team-work to "see them through." Undoubtedly that is a principal reason that the army tests served their purpose so well.

NEW MENTAL TEST PROPOSITIONS TO BE "SOLD"

This being the case, a very present interest attaches to the circulars received by the *Journal* from the World Book Co., announcing a series called *Standard Educational Tests*. These have been devised by Dr. M. E. Haggerty, professor of Educational Psychology at the University of Minnesota, whose interest

and activity in psychological research, we are told, "covers a period of several years and began while he was a Professor of the University of Indiana." He is also a member of the National Research Council Committee that is making the National Intelligence Tests. Naturally, the prospectus touching the activities of Dr. Haggerty harks back to those Gargantuan experiments in 1917 and '18 that were the making of the army tests.¹

Major Haggerty's experience in the army tests and in the Virginia survey has led to this adaptation for school use. The prospectus appropriately suggests in the sub-heads "How the Haggerty Tests were made," "Where the Tests Have Been Used," (St. Louis, Minneapolis, Madison, etc.), "What the Tests Have Accomplished"—things the canny buyer should always look into. The publishers have used the full armamentarium of selling methods to call attention to the merits of their wares. This includes a mimeotyped letter to the Editor suggesting a review, an informative circular of railroad folder type, a mimeographed list of talking points in advocacy of the Standard Educational Tests and a similar sheet for the special information of the reviewer. Added to this is a full sample set of the tests themselves.

The circular gives a detailed description of the Haggerty Intelligence and Achievement tests: for grades one to three, there are achievement examinations in reading (labelled Sigma 1), Intelligence tests for the same (labelled Delta 1); for grades three to nine, the Intelligence examination Delta 2 is printed in a pamphlet of "twelve pages measuring 8½ by 11 in."²

This is as frankly and as directly and as openly and as honestly a commercial proposition as well could be wished. But, lest the reviewer appear to cast aspersions, be it recalled that it is only in recent years that scientists have been affected or infected with the fear of seeming mercenary. It was not very long ago that Mr. Locke, author of a famous essay that nobody reads nowadays on a subject that everybody seems to have forgotten, in the preface to the New Edition of the "Essay Concerning Humane Understanding," (London, 1706) wrote as follows:

Besides this, the Bookseller will think it necessary I should advertise the Reader, that there is an Addition of two Chapters wholly new; the one of the Association of Ideas, the other of Enthusiasm.

Modern authors do not as naively acknowledge their book-sellers. The time has come now when the book-seller does the acknowledging for the author.

There is a refreshing frankness, lucidity and common-sense about this author's own booklet explaining the tests, that ought to go far to "selling" the proposition.

We do not propose to go further into these tests at the present time because

¹Army Mental Tests. Compiled and Edited by Clarence S. Yoakum and Robert M. Yerkes. Published With the Authorization of the War Department: Henry Holt and Co.

²Put up in packages of 25 pamphlets with one Class Record sheet. Price \$1.50 net. (Packages will not be broken).

we believe that it is out of the province of this Journal to review in detail the merits of this or that set of tests, except where the tests have developed something distinctly touching the study of the Abnormal.

Dispensing with technical criticisms, we should like to mention that Captain Garry C. Myers and Caroline E. Myers have put out a very unpretentious but forward-looking test known as *The Myers Mental Measure*. Consisting wholly of pictures, it is described as "the first group intelligence test applicable to all ages." For this test, age and grade norms are being developed. Dr. Myers is one of those who have stayed longest in the army psychological service and has received the appointment of Director of Education at Camp Upton's Recruit Educational Centre.

THE RIGHT AND THE WRONG WAY TO "SELL"

That a big effort should be made to sell a series of tests is no proof of its merits. Nor is it a detraction in the era of the new commercialism, when University laboratories are accepting retainers for services to commercial houses, and when, on the other side, commercial houses are maintaining laboratories and research departments as fully imbued with the scientific spirit as those of the endowed Universities. Accordingly, let us live in the new era and "commercialize" tests in the proper and progressive sense of the word. But this applies to the buying, no less than to the selling end—*Caveat Emptor*.

When one buys a mental measure, one is not buying a pure scientific formula. One is buying something analogous to the headlight of an automobile, a shock absorber, or some new speedometer. Not only should we consider the intrinsic merits of the machine as such but we must consider the environment in which it is to be used, the weather, the roads, and, even before all, the car to which it is to be adapted and the personality of the man who is to be responsible for the care and operation of the mechanism.

A consideration of mental tests demands, from the mercantile standpoint, a bit of worldly wisdom that looks beyond the thing for sale, into the atmosphere of its use. For there are always two aspects, as in commercial propositions: the concrete claims based on talking points, which serve to interest the prospective buyer, and (2) the net effect of installing the system whatever it may be.

Let us illustrate.

There is a gentleman who sells a peculiar kind of oil. It is colored a lively green or violet (we forget which) and carries a picturesque name. Elaborate directions are given for the use of this oil as a scale-preventive in a certain kind of steam generators. Various bronze pipes and attachments are placed on the boilers to feed this oil to the surfaces where the scale would form. Now what is the secret of this oil? Is it the mysterious formula on which it is compounded? Probably not. The essential fact is that once the mechanism is fully installed, the engineers, the foremen, and superintendents of the plant are required to make

reports on the condition of their boilers and in that way—through the assiduity of the agents of the installing company and their vigorous complaints when their oil is not “given a show”—there results more cleaning of the boilers and a more careful inspection than would be given without the large element of personal responsibility and discipline which is introduced with the Corruqa oil.

In a similar way the practice of mental tests may result in promoting better grading of school pupils or better classification of industrial personnel, not so much through the virtue of the test itself as owing to the fact that its installation induces otherwise indifferent people to “size up” their human material with more discrimination. This is not a disparagement of mental tests; it is simply a focussing upon that practical element which enters into the matter and which makes a great deal of scientific discussion and mathematical inquiry both futile and beside the point. If a series of mental tests is properly “sold,” like this Corruqa oil for boilers, it means enlisting the personnel to take care of the whole situation. In this sense, a very poor set of mental tests (intrinsically and mechanically judged) would furnish a very valid reason for installing their operation. But it is in every case a matter of *caveat emptor*: let the buyer beware. And let no school authorities *force* the tests upon teachers unless it is certain that the whole hierarchy will be “sold” in the right sense of that word.

LIFTING THE AGE LIMIT

A weak selling-point of the intelligence tests in general was, for years, the low age-limit within which their ratings were confined. Now, although army conditions revolutionized this situation by providing millions of older and higher grade subjects, the mental testers had still at the armistice to win their spurs in civilian practice.

L. L. Thurstone's *Intelligence Tests for College Students* serve to typify this new situation, although it is to be presumed that he already wears his silver spurs even if not yet his golden ones in the mental testing lists. Thurstone's stint for statistifying the intelligence of students has the merit of being a concrete half-hour ordeal. One thing of good augury is the moderation of the author in claiming conclusiveness for it. He strikes a conservative note to the effect that “intelligence tests should not be made the sole criterion of admission; because a student may have superior mentality as demonstrated in the intelligence test and still be a failure as a student on account of insufficient high school preparation.” And the converse is also stated to show to what extent intelligence tests should be meshed in to other practical tests of actual scholarship.

Perhaps the most important suggestion for the commercial exploitation of mental tests lies latent in his reference to the electrical tabulating equipment that is installed at the Carnegie Institute.

The reviewer dares to say that the use of automatic tabulating systems, comparable in performance to the assorting of census data, is almost a pre-requisite of any sort of *arrivé* status for intelligence ratings. Such machines not only

permit of testing a larger number of subjects but allow a greater latitude in multiplying observations upon the individual. This facility once established for mental testers, they are likely to give a new turn to their work and to fill out the necessary scantiness of their data—which they now deplore as a *sine qua non* of the present skeletonized ratings.

WHAT IS THE MATTER WITH MENTAL TESTS

It is particularly relevant to the next work that we have to review to say that what is lacking in mentality scales and what is to be supplied to the market soon by the competitive efforts of psycho-metricians is a better analysis of the functions to be tested. In the mental testing valley what is lacking is not omniscience but a willingness to recognize that—"on the other side of the mountain," in the vale of tears called abnormal psychology—there are workers who have information as yet unutilized in the general development of tests.

The outlook is conservatively presented in this same perspective in Shepherd Ivory Franz's *Handbook of Mental Examination Methods* (2d edition, 1919). Of all the offerings we are considering this is the most suitable to be read, marked, learned and inwardly digested. It acknowledges very clearly the philosophic background and environs of abnormal psychology.

To be sure a "mental examination," in psychiatric practice, is not the same as an intelligence rating. The call for somebody to be mentally examined is a challenge to the honest examiner, summoned to the ward or the clinic or the O. P. D. or the Binetting room. Who shall plumb the mind? Who shall take the high seat that Emerson refused to take "and adapt his conversation to the shape of heads?" Who shall make these "bold experiments with the mind?" Franz partly answers these questions with flashes of insight that illuminate the penumbra of his immediate subject.

Franz's *Mental Examination Handbook* is made as clear to the casual and the average reader as to the psychological expert. It carries distinctly the impress of ward-work and the discernment of all-round psychiatric experience. Something a little more self-advertising would have been at least excusable, although not expected by those who know the author's spirit. Of this spirit, the fact of dedication to Edward Cowles is typical. It is well to be reminded of such a man, who without brass bands and without preempting high station in the world gave the very oxygen of thought to his followers and to other students of the mind's natural history.

Something of the same intellectual ozone pervades Franz's book. Imbued evidently with a deep sense of the goal of mind-study Franz takes us into a realm more vitalizing than his title would imply. He has penetrated into the clinical groves without loss of orientation. He does not miss seeing the forest, from looking at the trees.

MERITS OF FRANZ'S HANDBOOK

We find in Franz everywhere a poised view. The reader of this *Handbook* need have no fear of recommending it on account of any possible lack of up-to-dateness or on account of any bias in favor of mental tests—which is more than can be said of many other such books. To the novice in psychiatric service Franz throws many life lines. He is like a swimming instructor who is trying to break the tense grip of the student on psychometry, encouraging him to swim free. There are delicious bits of cynicism (or that would be cynicism if it were not for the kindly humor back of them). Here is a grim word of caution regarding treatises on psychology:

"The psychological value of any particular work must not be judged by the information which the writer has of the insane and of other abnormal classes. *As a rule, psychologists have had neither the opportunity nor the inclination to observe or to investigate the abnormal* and their discussions of these topics are often unsatisfactory on account of second-hand information." (Preface).

The italics are ours.

Far from setting himself up as a psychologist who furnishes full information about mental anomalies he admits overlooking valuable methods, pointing out that "in certain cases, especially for research purposes, it may appear advisable to follow up mental states with a more careful analysis than can be made with the methods suggested here."

The would-be student of the mind, both normal and abnormal, is thus forewarned that he cannot live and die within the field of Franz's list of mental examination methods, which obviously are far from representing the full armamentarium of the writer himself.

The order of chapters is excellent, beginning with the simple and advancing to the more complex. Dr. Franz's method of orienting the reader is kept up consistently throughout the book. Each chapter carries its proper intellectual first-aid package. He is careful to explain the "hard" words. For instance, *psychopathology* is well defined (p. 10).

Particularly valuable is the admission from such a veteran observer that *Neurology* is a word with double meaning. Not without sternness, he points out the appalling inconsistencies in the use of this term. And he has thrown a search light on the unfortunate gap that estranges neurologists (in certain quarters) from psychologists:—

"Nevertheless some neurologists consider psychology a part of neurology but inconsistently refuse to believe that the psychologist who contributes by his researches to an understanding of mental processes, is thereby a neurologist." (P. 11).

We regret that Franz has not made his distinction between the terms *perception* and *apperception* as sharp as he has made his other separations (p. 74-75). We think it is fair to say that there is no more important mental operation

than that which is concerned in what he calls the test of Apprehension. Especially when one has the insane to deal with, it seems best to employ the word *apperception*. For the mental attitude of many confused patients who are apt to come into the laboratory is precisely that state of anxiety and expectation which we should call apprehension.

TESTS APPLIED TO EMOTIONAL DISTURBANCES

The memory tests for connected trains of thought should interest particularly the student of abnormal psychology. Of the collection of short stories, which have a considerable affective-value, Franz says:

"If the emotional content in stories is of such a character that it is overpowering it may bring about an inhibition or mental stasis or even a memory loss for impressions which have preceded. Those stories which have an emotional part at the end, when this emotional part produces an emotional reaction on the part of the individual, often leave the subject able to repeat only the last or the emotional idea." (P. 109).

The more use of these short story tests the better. They might perhaps serve to acquaint workers in psychology with the importance of emotion in the association of ideas; thus paving the way for a true clinical outlook on psychic disturbances. Undoubtedly many disorders of memory called psychoneuroses differ only in degree and in extent of provocation from the disorders that Franz finds in the use of these tests. His own words, as quoted above, are highly significant.

The study of "shell shock" during the war has, of course, immensely enriched this general conception of the near-normal memory disorders and it is of interest that through so sober a Handbook as this one, an entering wedge for emotion-study should be driven into the psychologists' consciousness. Holding its own in the rift is Woodworth's *Test for Emotional Instability*. (P. 170 to 176).

It is too early to speak of the results of this test or to say how it will split the log over which two camps are contending:—the one of neurologists who take the view that there are no psychoneuroses without a certain inferiority or physical defectiveness³ and those who are more disposed to regard psychoneuroses as manifesting "stress of experience."

In fine, we see signs in this Handbook that Morton Prince's conception of association neuroses is being justified in new ways. Strangely enough, his own sober middle-of-the-road view of it, expressed years ago, is being made possible of acceptance partly by a backswing from the *outré* conceptions of the Freudian

³*The Somatic Causes of Psychoneuroses*, by Dr. Charles Dana, Journal of the American Medical Association, April 24, 1920.

school (pitfalls for so many unscientific minds) and partly by War's outrageous experiments upon human nature, as shown in so-called "shell shock" and "stress of campaign."

As to "association of ideas" Franz shows thoroughness and harks back to Aristotle. It is strange that an author of the depth and breadth of Franz should not introduce the name of the prime writer on the association of ideas, John Locke, Gent., who coined the term and who sought to give it exactly the meaning that Morton Prince has employed in "association neuroses."

However, anything that is felt to be missing in this work simply emphasizes its eclectic range and its excellent balance of interests. It should have the primacy as a Mentor in its subject.

In spite of the many new tests coming into the market and the many new alleged "standardizations" of old tests, we should not be taken unawares and captivated by the enthusiasm of their authors, though flanked with a showing of never so many school children or adults, in ranks and phalanxes of examinees. We think the better plan is to get a fresh orientation after the tumult and shouting of the war time tests, and the reviewer, for his part, expects to obtain it by a careful re-reading of Franz's *Handbook of Mental Examination Methods*.

L. H. HORTON.

REST, SUGGESTION AND OTHER THERAPEUTIC MEASURES IN NERVOUS AND MENTAL DISEASES. Second Edition. By Francis X. Dercum, A. M., M. D., Ph.D. P. Blakiston's Son & Co., Philadelphia, 1917.

THE TEXT of this book was written for the system of Physiologic Therapeutics edited by Dr. S. Solis Cohen. It appears now in its second edition revised and largely rewritten. The arrangement is systematic but follows a classification which is hardly in accord with our more modern views. The first part concerns itself with rest as a therapeutic measure. Under this general heading the conditions considered are under the old nomenclature of neurasthenia, hysteria, hypochondria, together with a description of the application of "rest" in chorea, epilepsy and various other functional and structural disorders of the central nervous system. The second part of the book concerns itself with the "therapeutics of mental diseases" and the third with "suggestion."

As a general statement of therapeutic measures which have stood the test of time the book is to be highly recommended. As an expression of the newer ideas one must speak less favorably. As a student and at one time colleague of Dr. S. Weir Mitchell it is, perhaps, not to be wondered at that an undue amount of attention is given to the role of rest in the treatment of the most varied disorders of the nervous system. Dr. Dercum still believes with unwavering faith in the complete efficacy of the so-called Weir Mitchell rest treatment in the neurasthenic state and gives an admirable description of the method as employed

by its originator. The value of this method is certainly not to be questioned but in the light of more recent experience it appears equally true that the interpretation put upon its efficacy by Mitchell and certain of its subsequent advocates is not wholly justified by the facts. The failure of the treatment in the hands of other men has been demonstrated time and again and the feeling has grown that the insistence upon rest and the methods intimately associated with it as originally advocated have not stood the test of universal practice. As a matter of fact, while acknowledging the full debt which we owe to the rest treatment as such, it has doubtless done harm because of the apparent ease of its application and the universality with which it was at one time used. The sentiment is growing that in the great proportion of cases which Dercum still classifies as neurasthenic, rest is decidedly contraindicated. In this connection it is clear that the nomenclature is likely to lead to error. It would be far better for the progress of our knowledge at the present time if the word "neurasthenia" with all its false connotations were dropped or at least placed in a very subordinate category. This Dercum does not see fit to do with the result that a natural confusion arises in the reader's mind as to what is or should be meant by the term "neurasthenia" as now used by many of the classification makers.

In any book on therapeutics it is inevitable that the clinical aspects of disease should be discussed at considerable length and including as Dercum does the various signs and symptoms of so-called functional disease under the old categories, is not conducive to clearness when speaking of the various therapeutic attempts. He is curiously unwilling to give the psychogenic element in the causation of neurasthenia, as he uses that term, and hysteria the role which is generally granted it at the present time, which detracts distinctly from the significance of the book as a whole. Our feeling, therefore, is that in this first portion of the book which constitutes about half of the text, wholly undue emphasis is laid on the factor of rest and much too little upon the various elements now recognized as necessary in the production of the essentially mental disorders such as hysteria and so-called neurasthenia and conversely in their treatment. He insists that the hysterical individual is born, not made, and speaks with much satisfaction of Babinski's ideas regarding suggestion as causative of many of the signs and symptoms of the phenomena of hysteria which he agrees with Babinski in believing are "the result either of medical or other suggestion." In general, concerning this subject Dercum speaks with confidence and dogmatically of many matters which must still be regarded as in dispute.

The second part, on the therapeutics of mental disease, is a brief and, up to a certain point, adequate description of the more generally recognized methods. It takes no account whatever of the possibilities of a systematized mental approach to the problems of mental disorder.

In the third section on "suggestion," Dercum reiterates his well-known attitude toward the newer psychotherapeutic measures. What he says is interesting but will not be convincing to many students of this subject. His tendency is

to include in one general category, which he regards on the whole with slight respect, the group of psychotherapeutic methods which from time to time have arisen, from the earliest period down to the present. This part of the book is unsympathetic and not in accord with the spirit of progress. The subject of psychoanalysis he discusses and dispatches in a space of twenty pages. He says that the work of Freud and his collaborators and by implication the whole modern psychological movement is a repetition of the superstitions of previous epochs and dispatches it to the limbo of unproved theories. More than this he believes it on the whole more harmful than helpful. The cures he says "have the same unreality as those achieved by hypnotism." Again "psychoanalysis is an outcome of the general mystical tendency of the modern world." And his final thrust in this section is as follows: "To the jaded and blasé psychasthenic patient, to the chronic hysteric, psychasthenic, hypochondriac or what not, to the patient who has tried all sorts of procedures, psychoanalysis presents something new, something interesting, something pruriently exciting." To the casual reader it appears that a modern work on the treatment of nervous disorders should express with a somewhat broader perspective various existing viewpoints and this, admirable as the book is in many respects, Dercum has not succeeded in accomplishing.

E. W. TAYLOR.

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ORIGINAL ARTICLES

MISS BEAUCHAMP

THE THEORY OF THE PSYCHOGENESIS OF MULTIPLE PERSONALITY

BY MORTON PRINCE

I "SALLY"

An Alternating and Coconscious Personality

1. Foreword: The Data.

A NUMBER of years ago (1908) I published a study of the Beauchamp case (The Dissociation of a Personality). It was one of multiple personality and exhibited three different personalities alternating with one another. One of them, however, "Sally," besides alternating with the others, had a coconscious existence, in that she persisted as a self, i. e. a separate mental system possessing a differentiated self-consciousness, while each of the others was present. Thus there were two selves existing at one and the same moment, one coconscious to the other.

The account as published was largely limited to a study from a descriptive point of view of the numerous psychological phenomena of all sorts manifested by the case and to the reconstruction of the normal self out of the disintegrated fragments.

The discussion of the theoretic problems involved was deferred for a later volume. This had been nearly completed some years ago, when it seemed best to postpone the discussion until certain fundamental problems were studied. Accordingly these studies were incorporated in a volume, "The Unconscious," published in 1914. Then

came the outbreak of the war and since then the manuscript has been laid aside owing to other interests which, I imagine, the war brought to all of us.

While the literature is fairly rich with descriptive accounts of multiple personality, the psychogenesis of this phenomena has not received much attention, probably owing to the difficulties involved and, I venture to say, to a lack of understanding of the phenomena as well as of the problem itself. The present papers—a study of the psychogenesis of “Sally,” BI and BIV—are condensed chapters from the deferred volume, above referred to, planned as a larger study of the problem of human personality. In a recent number of the *Journal*¹ a chapter dealing with the same problem in another case, that of B. C. A., was published.

For those who have not read the first book (*The Dissociation*) and to refresh the memories of those who have, a brief resumé of the chief characteristics of the different personalities, (B I, B IV, and “Sally”) will be necessary for an understanding of this study.

Miss Beauchamp manifested three secondary personalities, B I, B IV, and “Sally.” B I, known as the “*Saint*,” was characterized by extreme piety, religious scruples, and moral traits that are commonly regarded as the attributes of saintliness—meek and dependent, never feeling anger or resentment or jealousy, bearing her hard lot with almost inconceivable patience, never rude or uncharitable, never self assertive, she might well be taken as typifying the ideals of Christian morality.

B IV was the “*woman*!” strong, resolute, self-reliant, “sudden and quick in quarrel,” easily provoked to anger and pugnacity, resenting interference and obstruction to her own will, determined to have her own way in all things at all costs, intolerant of the attributes of saintliness, the antithesis of B I, she belonged to woman kind and to the world. She may be called the Realist.

Sally, the *child* in character, thought, and deed—a mischievous delightful child, loving the out-door breezy life, free from all ideas of responsibility and care, and deprived of the education and acquisitions of the others—belonged to childhood to which she was in large measure a reversion.

Here are three personalities sharply differentiated in traits, health, educational acquisitions, tastes, feelings, etc., yet all derived

¹The Psychogenesis of Multiple Personality. *Jour. Abnormal Psychology*, October, 1919

from one and the same person and alternating with one another. The problem is (1), to find the elements of the normal personality (a) lost by, i. e. dissociated from the secondary personalities, and (b) those retained by the same;

(2), to find in each secondary personality complexes of ideas, traits, sentiments, instincts and innate tendencies, if any, which at any period of the normal development had been repressed or dissociated from the normal whole self, but which now reanimated had, by a synthetic rearrangement with other elements of that self and by secondary incubation, become constellated into a new secondary personality.

(3), the formulation of the psychogenetic mechanisms and forces by which the dissociations and rearrangements were brought about.

Sally, psychologically, is the most interesting of Miss Beauchamp's personalities because of the fact that she was not only an alternating but, like B in the B. C. A.'s case, a coconscious personality. Of course when B I and B IV alternated with each other the memories of the experiences of each respectively, and the constellation of the various complexes, instincts, sentiments, dispositions and other elements of personality belonging to one or the other, as the case might be, (according as to which was extinguished) remained dormant, conserved in the unconscious. In this sense each might be said to be sub-conscious to the other, but in a dormant state. The same was true, naturally, of both when they disappeared and Sally was in evidence as the principal phase of consciousness. This is more accurately expressed by saying that with each alternation there was, as is always the case, a rearrangement and new synthesis of the elements of personality: some were utilized in the new combination and some discarded. But with the emergence of the combination characterizing the one phase, the combination characterizing the other became dormant.

When Sally, however, disappeared the case was entirely different. This personality then still persisted. This was possible because she became not dormant but coconscious; that is to say, the combination of elements of this phase still continued to function (and often to express themselves as automatic phenomena) though the principal consciousness (B I or B IV) was unaware of this coconsciousness. This is a very important distinction. It meant the co-existence of two different combinations at one and the same time, each with a self consciousness. There were two I's then in existence. As with Bimi, the

ape in Rudyard Kipling's tale, "there was too much ego in her cosmos." I have elsewhere described the main characteristics of Sally² and must refer any one desiring a more detailed statement to what was there said but will reiterate the essentials.

(A) DISSOCIATIONS

(1) Sensory Defects

That Sally included a dissociated psycho-physiological condition is made manifest by certain mental and physiological stigmata which she exhibited. Amongst the latter may be placed the peculiar anesthesia which was present. With her eyes closed she could feel nothing; the tactile, pain, and temperature senses were lost; you could stroke, prick, or burn any part of her skin and she did not feel it; you could place a limb in any position without her being able to recognize the position which had been assumed. All this was true not only when her eyes were closed but when she was not allowed (as by the interposition of a screen) to look at the tested parts. "But," to quote what I have elsewhere said, "let her open her eyes and look at what you are doing, let her join the visual sense with the tactile or other senses, and the lost sensations at once return. The association of visual perceptions with these sensations brings the latter into the field of her personal consciousness. The same thing is true of auditory perceptions. If Sally hears a sound associated with an object she can feel the object. For instance, place a bunch of keys in her hand and she does not know what she holds. Now jingle the keys and she can at once feel them, as is shown by her being able to recognize the different parts of their forms [with her eyes closed]." Sensation could, however, be restored *temporarily* by suggestion. That an anesthesia with this peculiarity is due to dissociation is obvious and is a well accepted fact.

To quote again, "Sally's anesthesia extends to the somatic feelings. She is never hungry or thirsty. If she eats she does so as a matter of form or social requirement. There is also an entire absence of bodily discomforts. This anesthesia probably explains in large part Sally's *freedom from ill health*. She does not know the meaning of fatigue, of pain, of ill health. She is always well. It is probably, in part at least, in consequence of this anesthesia that Sally does not share the pain or other physical ailments of Miss Beauchamp, or any of the

²*The Dissociation of Personality* (Longman's, Green & Co.), Chap. IX. (The chapters and pages referred to in this study always have reference to this work unless otherwise designated.)

personalities. Let Miss Beauchamp be suffering from abdominal pain, or headache, or physical exhaustion, and let her change to Sally, and at once all these symptoms disappear. Sally knows of the symptoms of the other personalities only through their thoughts or their actions. She does not feel the symptoms themselves. The same is true of the sense of muscular fatigue. Sally can walk miles without being conscious of the physiological effect. Curiously enough, however, Miss Beauchamp may afterwards suffer from the fatigue effects of Sally's exertions.

"What is true of Sally in these respects as an alternating personality is also true of her as a coconsciousness.. *Coconsciously, Sally is always anesthetic.* If Miss Beauchamp's eyes are closed and any portion of the skin is touched or pricked, or if a limb is placed in any posture, coconscious Sally is unaware of the tactile pain or muscular sensations, although the other personalities are not anesthetic but perceive each sensation perfectly."

(2) Dissociations of Emotions and Instincts

When she emerged as an *alternating* personality some of the emotions (and consequently the innate instinctive mechanisms to which they belong) though components of the other personalities, even obtrusively so, were dissociated from Sally and hence were not incorporated in her make up. This, as I have found it, is one of the most important and determining phenomena in alterations of personality and to a large degree is responsible for the contrasting traits. It requires a special study by itself. I shall here content myself with pointing out merely the lacunae in her personality.

Fear. This instinct seems to have been entirely eliminated from Sally's composition. The objects, circumstances, etc., capable of arousing this instinct are so numerous that, of course, it is impossible to assert dogmatically that any person is absolutely devoid of it until put to every concrete test, and yet Sally showed herself without the fear-reaction in so many situations, physical and moral, which would ordinarily arouse fear in the average person, that I am almost compelled to believe that the instinct was lost in her. So far as I could see, none of the causes, such as a thunderstorm, or darkness, or social consequences of conduct, or illness, or fear of inanimate or animate objects, like fire, snakes, spiders, etc., or the numerous other things that awakened fear in the other two personalities—none of these things affected Sally. I have known her also to be in the most danger-

ous situations, such as climbing out on the eaves of the roof and preparing to jump from a fifth story window, without apparently experiencing the slightest fear. It is significant that Sally was also free from the pathological phobias which were so conspicuous in the other personalities. The most reasonable interpretation therefore is that the instinct of fear was dissociated from this personality.

Sexual Emotion (Instinct). This instinct also was completely dissociated from Sally who, like B. in the B. C. A. case, was a stranger to the emotion and psychologically sexless. As this cannot be said of her normal personality it could not have been a matter of organic development, but only a phenomenon of dissociation. Though she knew the meaning of sexual language as defined in the dictionary the terms conveyed no notion of that which they expressed. Dissociation of an instinct as an explanation of the lack of the normal reaction of the individual is proved in principle by study of the *sexual instinct*. This instinct is manifested by such a definite reaction that it is easily recognized and studied. It is not uncommon for this instinct to be absent under conditions that can only be interpreted as those of dissociation. For example, Mrs. F. S. as a result of an emotional trauma completely lost this instinct—a matter of considerable consequence, as the conjugal conditions were on the verge of leading to divorce. A suggestion in hypnosis readily restored the instinct and conjugal happiness. If one chooses to distinguish by definition between inhibition and dissociation, insisting that what is inhibited is not dissociated, it can be shown that in many instances the instinct is not inhibited because it functions in dreams and in another phase of personality. It is dissociated from the psycho-physiological composition of a given personality.

Parental Instinct. The data do not permit us to form a definite opinion regarding the presence or absence of this instinct, but Sally's attitude towards children, when contrasted with that of the alternating phase (B I) makes one very suspicious of her having retained it. The love of children in B I was very marked. Sally simply disliked them, and certainly no tender emotion was evoked by them as it was in B I. Whether this emotion was evoked by other objects is a matter of doubt.

The emotion of disgust belonging to the instinct of repulsion or aversion, frequently observable in B I seemed to be absent in Sally. At least objects which excited this emotion in the former phase not only did not do so in the latter, but were often attractive. This however might be attributed to the formation of different sentiments with

these objects, as will be presently explained. Still if the instinct was retained a sentiment of aversion to some object, punctuated by disgust, ought to have been formed, but this was not observed.

The feeling of subjection (self abasement). I do not think any one would have exhibited Sally as a shining example of this emotion and instinct. If this child of nature possessed it, I failed to observe it. She was certainly free from any shyness, or self-consciousness, or sense of inferiority which so often torments and spoils the lives of normal people because of this instinct. Nor did she exhibit any sentiments in which self-abasement is incorporated.

It was probably due, in part at least, to this loss that she never inherited from Miss Beauchamp or acquired any religious sentiments though they were predominant in her other self—B I. The “saintly complex,” a religious ideal, intensely motivated by the instinct of self-abasement, which had characterized and colored the whole life of the original self, was left out in our young scapegrace. No, Sally did not know the meaning of self subjection even before an ideal of Divinity.

Whether *hunger* be regarded as an instinct or appetite, or simply a craving reaction, Sally was devoid of it. This, perhaps, may be explained by the somatic anaesthesia by which all bodily sensations were dissociated. However that may be, the contrast between the absence of appetite of this alternating self and the enjoyment of food by the one known as B IV, who was the butt of Sally’s jokes because of her appetite, could not be overlooked.

These were the principal emotions and instincts which were not incorporated in the composition of Sally, and which I interpret as dissociated inasmuch as they were manifested in one or other of Miss Beauchamp’s selves.

On the other hand there was one instinct or innate craving (whatever it be considered) which was dominating and insistent in the childlike Sally. It stamped the character of her personality. It completely governed her behavior. It was all the more striking in that it was left out of B I’s composition. This was the *play* disposition. The significance of this we shall see when we study the psychogenesis of this alternating and coconscious self to which the dissociation of Miss Beauchamp gave birth.

(3) Sentiments

Corresponding in a general way to the loss of particular emotions and retention of others was the absence, on the one hand, in Sally of

sentiments which characterized the normal self and, on the other, the possession of sentiments peculiar to herself. Thus the differences in the characters of the original Miss Beauchamp—the Real Self—and of the secondary youthful child, Sally, became manifested. When we come to the study of the psychogenesis of the other two alternating selves we shall find the same variation in the sentiments and corresponding variations of character. It is well to understand clearly the meaning of "sentiment," the precise sense in which it is here used, otherwise the significance of these variations or alterations of personality will be missed.

The modern conception of "sentiment" we owe to Shand. By "sentiment" I mean an object, or idea of some object, which has been organized by experience with one or more emotional *dispositions*. As an emotional disposition is an instinct or part of an instinct, a sentiment is an idea structurally organized with one or more instincts from which it derives its motivating force. Thus the idea of mother may be organized with the instincts possessing the emotional dispositions of tender feeling, reverence, etc., that of God with tender feeling, awe, subjection, etc. Sentiments, then, become complex units in the structure of the mind. In the psychological terminology of the day a sentiment may be defined as an emotional complex. This concept, a modification of Mr. Shand's, we owe in *principle* to him. Mr. Shand's conception, or some modification of it, like the one I have formulated, is, I believe, pretty commonly today adopted by psychologists. Such differences as exist relate to the exact structure of the organization of the complex. With the latter we need not concern ourselves here. This concept accords fairly well with the usage of popular speech, but it has certain important implications, supported by observation, which popular usage does not realize and take into account. It is popularly recognized that emotions become linked by experience to objects or ideas of objects. But that is not the point. There is nothing new in that. That has been understood ever since Adam kissed Eve. The point is that in the linking of an idea to an emotion, what happens is, the idea becomes structurally organized with an instinctive psycho-physiological disposition, of which an emotion, such as fear, or anger, or curiosity, is a component, and which has an aim or end. Now when the instinct is excited not only is there felt emotion, but the impulse of the disposition is an urge or drive which carries the instinct to fulfilment and satisfies its aim. If the instinct is that of flight (fear) the urge is to escape; if of pugnacity (anger) to break down opposition, and so on. Fur-

ther, in consequence of the organization of the idea of an object with the instinct, the presentation of the object in consciousness necessarily awakens the instinct which then determines behavior in relation to the object, in that it impels escape from the object if the emotion is that of fear; to possess it if the emotion is of love; to injure it, if of hate. Idea and instinct, then, in this sense is a sentiment. A sentiment, thus, though a complex, behaves as a unit, as a psychical whole, which has an aim which it strives to satisfy. And it is important to bear in mind, for the purposes of a study such as this, that with the awakening of a sentiment in consciousness there is let loose impulsive forces discharged by its instincts (emotions?) which not only determine behavior, but control, inhibit, dissociate, repress, excite, or otherwise affect other mental processes.

But this is not the whole story of a sentiment; it is too schematic. A sentiment is a product of the growth of the mind and organized by experiences. This means that it has its roots in a greater or less number of antecedent experiences related to its object. It is a growth from these roots. It is a product of these experiences and because of and by them it has been organized. You cannot functionally and dynamically isolate a sentiment from these experiences, that is, from the dispositions acquired by these experiences. It is, therefore, more or less strongly organized with them. They as a setting or context give it meaning, just as every idea is dependent upon its setting for its meaning. This is very neatly shown by a study of pathological sentiments, such as the probias. Practical examination of these sentiments shows that they are so strongly and intimately rooted in a complex of antecedent experiences that the origin and true meaning of the phobia can often only be understood by bringing to light these experiences. They furnish the viewpoint and attitude of mind towards the object of the sentiment. Nor can you kill a sentiment except by killing these roots; that is without changing the setting, which means the viewpoint. Alter the setting and you alter the point of view, the attitude towards the object, and then destroy the sentiment.

From all this it follows, if this theory of the sentiments is true, that sentiments are integrated with larger systems of dispositions, deposited by the experiences of life. In these larger systems there are also organized other instincts of which the drive or urge cooperates with the drive of the sentiment in determining the mental attitude and behavior in given situations: e. g. fear when the loved object is in danger; anger when it is injured. Sentiments and their roots, the

settings, thus are organized in still larger complexes or "psychic wholes." At least this is my interpretation of the facts. (In my view both Mr. Shand's and Mr. McDougall's conceptions of the structure of a sentiment fall short in that they are both too schematic and theoretical and fail to take into consideration all the facts of observation, particularly as revealed by pathological studies.) At any rate sentiments and their "settings" are integrated in mental systems in the course of the growth of the mind, and characterize personality.

It is hardly possible to overestimate the part played by sentiments in the determination of personality and character and hence in alterations of personality. Upon the sentiments, among other things, largely depend the habits of thought, the behavior, and reactions of the individual to the environment, and, therefore, those traits which we select as particularly marking the character of the personality. This principle was readily recognized in Miss Beauchamp whose sentiments stood out in high relief and strongly contrasted with those of Sally. That Miss Beauchamp had built up, as a result of her self education and day-dreaming habits, a large number of sentiments possessing more than usually intense emotional dispositions, not only in connection with the "saintly complex" but with many other ideas and objects, is apparent from the biographical history of her case. These sentiments were the basic structure of her idealism. The church and religious services and music, the Madonna, Christ, all that pertained to religious worship had become invested with emotions of love, and reverence, and self subjection, and feelings of exaltation and pleasure, and thereby had become objects of sentiments.³ Likewise the divinity worship of her mother, in which afterwards several other persons were successively incorporated, indicated a similar sentiment. An opposite sentiment which included fear and dislike involved her father. Seeing people and the world about her not as they were, clearly and truly, but as they were colored by her imagination, she built up strong sentiments of an idealistic sort which gave a peculiar stamp to her character and she was known as "an original." People, natural objects, and animal life (snakes, spiders, etc.) became endowed with intense emotional dispositions of one sort or another and thereby formed sentiments.

Sally, as contrasted with Miss Beauchamp and the other two alternating personalities, presented three peculiarities in respect to her sentiments. The first was that some of the most characteristic and dominating sentiments of her whole original self were entirely lacking

³ Chap. XXI and Appendix R

in this secondary mutilated self. Sally, like a shorn lamb, emerged absolutely denuded of these. Likewise many of the sentiments of the other two alternating personalities B I and B IV did not exist in Sally. Expressed in a different way, the same objects or ideas which in Miss Beauchamp were organized with certain particular emotions were entirely devoid of these emotions in Sally's mind, or, as I will presently explain, were organized with a quite different emotion. And likewise with respect to the ideas of B I and B IV. Furthermore such sentiments were organized with different settings and consequently acquired different "meanings." Thus it was, for example, that religious ideas which stirred with intense emotional reaction the other personalities, particularly Miss Beauchamp and B I, awakened no such emotions in this young scapegrace. Their ideas had for her not only no religious emotional tone but also no religious meaning. In her mental composition they were not organized with emotions into sentiments. Hence they did not stir her. She considered them all *fol-de-rol* and was simply bored. The "saintly complex" with its sentiments of sainthood, which largely dominated Miss Beauchamp and B I, is a good example. Sally had no such complex. It was the same way with persons, and places, and scenery. Sally was devoid of the sentiments, which, often intense in their emotions, many of these objects formed in minds of the other personalities. In other words the emotions which were centered about certain persons, places, scenery, etc., found no such association in Sally's consciousness and hence were not animated by these objects. The failure to acquire such sentiments corresponded as a rule, I think, with the loss of the appropriate instinct. When dealing with the psychogenesis of the case of Sally this point will be more fully considered.

The second peculiarity which Sally manifested as respects the sentiments was the organization about an object of emotional dispositions entirely different from those organized with the very same object or idea in the consciousness of the Real Self or one of the other secondary personalities. The consequence was that an object for which Miss Beauchamp had a sentiment of reverence, or gratitude, or awe, or affection, or fear, or self-abasement, etc., awakened in Sally, in her turn, a sentiment of jealousy, or humor, or playful sport, as the case might be. Likewise the former personality might have a sentiment of repugnance, or aversion for objects which excited joy and wonder in the latter.

The third peculiarity was the fact that Sally had sentiments of

her own for objects which were entirely indifferent to Miss Beauchamp. These were chiefly of a child-like order such as pertain to childhood.

The second peculiarity often gave a dramatic setting to the situation when the change from one personality to the other took place; as for instance when Miss Beauchamp, coming to herself, found herself talking familiarly and joyously with a person to whom she had an aversion and of whom she disapproved; or handling a collection of spiders and snakes, of which she had an intense horror.

In accordance with the third peculiarity Sally manifested sentiments some of which were, coconsciously, of long standing since childhood. For instance, the disposition to play, long since dissociated from Miss Beauchamp, remained conserved subconsciously and, as I have said, was conspicuous in Sally's make-up. In accordance with this disposition a large number of sentiments pertaining to sports, outdoor life, etc., had been organized in her personality. Similarly in the course of time she built up sentiments of her own in connection with the persons and objects that came into her life; she had her own little "keep-sakes" and treasures not shared by the others. Some of these persons and objects were common to the lives of all the personalities, but, as I have said, the sentiments of each phase differed; with one and the same object B I would have the sentiment of veneration, Sally of play, B IV of hostility.

This change in the composition of the sentiments involving the same idea as its object may seem somewhat strange at first thought, but if we stop to think a moment we will recognize that the same thing is often observed in everyday life in moods. In each mood one and the same object is organized with different emotional dispositions and in different settings so that the object is accompanied by different affects and has a different meaning for the individual.

This difference was interestingly and instructively exhibited in the facial expressions of the different personalities of Miss Beauchamp. As an objective sign of the fundamentally governing sentiments of each I have described it in the full account of the case.¹ Referring to B I and Sally it was remarked: ". . . with both Miss Beauchamp and Sally every mood, feeling, and emotion is accompanied automatically by its own facial expression, so that, as each individuality has a dominant, and for the most part continuous, emotional state of mind, each wears a corresponding expression, different muscles coming into play in each. By this expression alone it is generally possible at a glance to

recognize the personality. As this expression is purely automatic and the accompanying resultant of the emotion it is impossible for one personality completely to simulate any other. When Sally tries to impersonate Miss Beauchamp the best she can do is to try to look serious; but as she does not *feel* serious, or actually have the emotion or mood of Miss Beauchamp, her face does not really assume the expression of that personality. Occasionally Sally will have for a moment, under the influence of some event, such as a scolding or threat of punishment, a depressing or anxious emotion identical with that of Miss Beauchamp; then her face will wear an expression indistinguishable from the latter's, but as a rule these variations are only momentary."

In view of the large part emotional dispositions, as elements of instincts and sentiments, and the other innate dispositions play in the determination of personality it may be instructive to tabulate the emotions as present or absent in the three personalities for purposes of comparison. With this purpose in mind it will be convenient to follow, chiefly McDougall's classification of the primary and compounded emotions and of the innate dispositions.⁵ In doing so it is not necessary to commit ourselves to an entire acceptance of its correctness or of the soundness of the analyses upon which it is based. For the purpose I have in mind it makes no difference whether an affective state is primary or composite. It is not easy or always possible, of course, to determine the retention, and still more difficult the total absence, of affective dispositions in an individual. The disposition may exist but its emotional reaction may be excited only by some special situation in which the person may be placed. If a person flies into a rage in a given situation, as B IV did on numberless occasions, we know he possesses the anger reaction (and instinct), but if he does not exhibit this emotion it may be that the situation is not one that will excite the disposition in him, but it might be that another situation would do so. Still such simple everyday emotions as anger, fear, tender feeling, subjection, etc., are easily determined under prolonged observation. The difficulty is with the more complex and rarer affective states (senti-

⁵There is considerable difference of opinion as to what emotions should be regarded as primary and what affective states as compounds of these or others. The analysis of an affective state is no easy matter. It is largely one of interpretation, of the correctness of which we have no absolute test—no test by which it can be determined that all the elements have been differentiated, or even that the true elements have been discovered.

ments) like awe and gratitude. Special situations peculiar to each individual are necessary to elicit these states, and particularly to build them up as sentiments. When, however, a person has been under continued and close observation in all sorts of situations during six years, with every opportunity to examine the content of consciousness, it is possible to determine with certainty the presence and absence of many affective states, though we may not be able to satisfy ourselves regarding others. In the following table when there has been any doubt as to the fact recorded a question mark has been added. When the evidence has been insufficient to form any opinion the fact has been recorded alone by a query. It should be further said that the personalities were not absolutely fixed in respect to their emotions; they had their moods as well as normal people. And, although these moods were mainly characterized by feelings of pleasantness or unpleasantness and of exaltation and depression, nevertheless in one mood an emotional reaction might be excited by a given situation while it would not be in another by the same situation. This is also true of normal people. There was, however, always, I believe some situation, as with all people, which would induce the reaction peculiar to the personality. Whatever the amiability at a given moment of B IV, for instance, she could not be trusted too far, for there was always some irritant that would arouse anger; on the other hand, in no mood could B I be excited to anger, which must be rare in normal people. Sally was the least changeable and rarely showed differences of moods.

Instincts

Primary Emotions	}		Sally	B I	B IV
		Anger	Present	Absent	Present
		Wonder	"	Absent ?	"
		Elation (Self-assertion)	Present	"	Present
		Fear	Absent	Present	"
		Disgust	"	"	?
		Subjection	"	"	Absent
		Tender Emotion	Present	"	?

Sentiments

		Sally	B I	B IV
		Present ?	Present	Present ?
Compound Emotions and other affects	Love	Present ?	Present	Present ?
	Hate	Present	Absent	Present
	Admiration	?	Present	?
	Awe	?	?	?
	Reverence	?	Present	Absent ?
	Gratitude	Absent	"	Absent
	Scorn	?	Absent	?
	Contempt	?	"	?
	Loathing	?	"	?
	Fascination	?	?	?
	Envy	Present	Absent	?
	Reproach (self)	?	Present	?
	Anxiety	Absent	Present	Present
	Jealousy	Present	Absent	?
	Vengeful	"	"	?
	Resentment	"	"	Present
	Shame	Absent	Present	Absent
	Bashfulness	"	?	"
	Joy	Present	Absent ^a	Present
	Sorrow	"	Present	Absent ?
	Pity	Absent ?	?	?
	Happiness	Present	Absent ?	Present
	Surprise	"	?	?

Other Innate Instincts and Tendencies

	Sally	B I	B IV
Play	Present	Absent	?
Sexual	Absent	"	Absent ?
Acquisition	Present	"	?
Sympathy	"	Present	Absent
Suggestibility	"	"	Present

^aExcepting when in a special condition of ecstasy (chap. XXI). Joy and sorrow are not accepted by McDougall as true emotions.

(4) Intellectual Defects and Characteristics

Of the *intellectual stigmata* the dissociation of many of the educational acquisitions of Miss Beauchamp is noteworthy. In a general way it may be said that Sally had lost Miss Beauchamp's culture—the knowledge of foreign languages, shorthand, mathematics and general higher culture. This means that she did not have access to the unconscious storehouse of these conserved dispositions. Their complexes could not be switched on to those constellations which constituted her personality. It is interesting to note that when attempts were made by her—in experiments to test her intellectual faculties—to make use of this culture, for example, to make different calculations, with the synthesis of the lost knowledge she changed to Miss Beauchamp (B I). That is to say the B I constellation replaced in mass the Sally constellation. For this reason the latter objected to the experiments. The same phenomena often happened when she was forced to recall certain intense emotional experiences.⁷ The impulsive force of these emotions, which were dissociated from Sally, when thus awakened, determined the awakening of the whole B I (or B IV) constellation.

(B) SYNTHETIC DATA

The ideas which took a dominating part in Sally's personality and stamped individuality upon her character were, as we shall see later, derived from conserved complexes which had been formed by the experiences of childhood and youth. Invested with emotions of joy and happiness and feelings of pleasure and excitement, they were the centres of sentiments. They were also to a large extent organized with the innate disposition or instinct of play. The mental systems into which they entered, and which may be summed up as play complexes, formed the settings or context which determined her point of view and perceptions. Other ideas of course belonged to her memories for, with the exception of book learning and general culture of which I have already spoken, she possessed all the memories of Miss Beauchamp and B I⁸ and was aware of all their experiences. But, as has been stated, these ideas were devoid of the emotions with which they were invested as sentiments in the other personalities. In the Sally phase ideas of outdoor pastimes, sports, games, riding, hunting, skating, boating, and sailing; ideas of these and similar pleasures appealed

⁷P. 200.⁸Excepting, also, of course, certain sensory memories.

to her imagination, and invested with complex emotions—joy, happiness, play, curiosity, interest, etc.—aroused feelings of pleasure and excitement; and tales of adventure and hair-breadth escapes; of hunting and fishing and outdoor sports, and all that excites the spirit of youth—the spirit that bubbled over within her—awakened an intense interest and emotional excitement.

It was these sorts of ideas which, invested with emotions, formed the main sentiments and, therefore, determined the character of the personality; it is also to be noted that the sentiments were those which are generally characteristic of childhood and youth, and there is evidence that they were the persistence and *recrudescence* of sentiments formed during those early years, but long since dissociated, or repressed, from the consciousness of the self-cultivated personality—Miss Beauchamp—and dormant.

It should be further noted that these ideas are those which normally are associated with the play "instinct," particularly in immature years, and in Sally this was the dominant instinct. One might almost say that everything naturally connected with this instinct awakened a response and expressed itself in impulsive tendencies. Even her fondness for and habit of teasing and mischief, much to the discomfiture of her other selves, was merely the expression of this instinct; for teasing was only a game which she, like a child, loved to play.

We may further say, from what we have been able to learn of Miss Beauchamp's early history and our knowledge of child life, that the Sally complexes were once, far back in childhood, a side to her character, just as they reappeared as a side to the character of the restored resurrected Real Self. With the restoration of the normal self, in situations which would naturally awaken the play instincts in a healthy normal person, Sally's sentiments and feelings and instincts bloomed again in Miss Beauchamp. In other words, to a large extent Sally was a *reversion* to a stage of childhood—to the complexes and reactions of that period.

But the Sally complexes we shall see reason to believe, when studying the psychogenesis of this phase, were the result of something more than a simple reversion to and reawakening of conserved dispositions deposited by the experiences of youth. There undoubtedly had been going on for years a subconscious incubation of these dispositions which had been continuously gathering into themselves new experiences, conscious and subconscious. The youthful dispositions had thus

been receiving fresh accretions of formative material until they had flowered into a personality. To this we shall presently return.

It remains to mention one other class of processes which entered into the constellation that formed this phase. As I have said, Sally was a coconsciousness as well as an alternating personality. As a coconsciousness she had perceptions of her environment which never entered the awareness of the principal consciousness. In this state she saw, heard, and was generally cognizant of much that neither B I nor B IV consciously recognized. She often perceived correctly external relations which were incorrectly perceived by them. When Sally became an alternating personality this unusual and accessory knowledge was retained by her. Consequently her experiences, and her knowledge of the environment differed to a certain degree from those of the others and contributed to this extent in differentiating the personalities. Likewise a large mass of evidence goes to show that as a coconsciousness there were trains of thought and feelings that did not enter the conscious stream of the principal consciousness. This large coconscious mental life tended further, by coconscious elaboration, to build up complexes which later appeared in consciousness as memory when she was an alternating personality, and thus to further characterize and differentiate this phase.

In this analysis of the Sally phase I have done little more than give a descriptive account of the facts and observations. Sally was in everything, save psychological development, a child. Her instincts, her mental reactions, her perceptions, were those of a child. Her perceptions of W. J., for example, were of a person who would give her candies, take her on excursions, give her youthful outings, etc., while by contrast the perceptions of B I for the same person were of an exalted being to whom reverence and admiration were due as to a preceptor and religious guide. In each phase the meaning of the perception was determined by the complexes forming the context which contained the corresponding sentiments. Sally's complexes were, therefore, those which were characteristic of youth. This youthful personality, however, was modified, more or less, by the fact that she was aware of the social and worldly experiences and knowledge gained by the other personalities, and therefore knew, as a matter of expediency, that her activities must be correspondingly curbed and her behaviour modified to fit the exigencies of conventional life. This she was in a degree accustomed to do voluntarily, but her sentiments and impulses were those of the youthful ideas I have described.

By way of summary, then, we may say that primarily Sally was made up of split off fragments of personality repressed from the main consciousness during childhood: Secondly; she was a reversion to a stage of childhood. Thirdly; in her mental composition there was a recrudescence of sentiments of early life, long ago repressed. Fourthly; there were incorporated complexes which were the result of the subconscious incubation of dispositions deposited by the experiences of youth. Fifthly; her mental composition included independent coconscious perceptions and thoughts elaborated into complexes and systems of memory distinct from those of the other personalities.

If this be a correct summary of the facts it remains to determine, on the basis of the given data, by what genetic influences this personality was created.

2. The Genesis of Sally

The genesis of Sally is another and psychologically more interesting problem. Thus far our study has been confined to its composition as an alternating phase, but the genesis of the phase cannot be understood without relating it to its roots in the subject's subconscious mental life in which it had its origin and development long before it appeared as an independent alternating personality. For the details of the phenomena through which this subconscious life was manifested I must refer you to the full account of this case.⁹ It is enough to say here that a large mass of evidence went to show that when the Sally phase changed to one of the other phases it did not become dormant, as was the case with the B I and B IV phases after they changed to one another or to Sally, but continued in activity as a segregated coconscious self of which the principal consciousness was unaware. In other words, while B I or B IV were in existence as an alternating self Sally still persisted as a self, incarcerated, so to speak, in her subterranean abode where she lived her coconscious life. There she had thoughts, perceptions, and feelings of her own. Whether her coconscious life was uninterrupted and continuous, or whether it came into being from moment to moment in response to stimulation, it is difficult from objective evidence to affirm with positiveness. She herself insisted as other coconscious selves have insisted that it was continuous, that is, that there was a continuous stream of coconscious thought just as when she was an alternating self. It is possible that this was an illusion on her part. However that may be it is not a matter of con-

⁹The Dissociation of a Personality.

sequence for our present purposes. Certain it is that as a coconsciousness she could manifest herself by so-called automatic phenomena (speech, writing, movements) and by influencing the principal consciousness by hallucinations, aboulia, inhibitions, etc., almost whenever she saw fit, and it was possible to elicit evidence of her coconscious existence whenever one desired.

When she became an alternating personality she retained memory of her coconscious life, and many of these memories could be demonstrated experimentally to be true reproductions of actual subconscious experiences. This phase needs to be considered, then, both as a coconscious and as an alternating consciousness.

Now how comes it that such a large coconscious life came into existence? It cannot be explained on the simple principle of alternation of phases, that is to say, as a necessary consequence of one constellation of mental complexes, B I or B IV, replacing another constellation (Sally), for observation of numerous cases of alternating personality shows that ordinarily one phase of personality does not become coconscious to its successor. When alternation occurs one phase simply replaces the other which in turn becomes dormant, ceases to have conscious activity. Neither B I nor B IV became coconscious to the other nor to Sally after replacement took place; nor did No. 1 and No. 2 in the case of C. N., nor C and A in the case of B. C. A., become coconscious after replacement, but simply dormant, and so with numerous cases in the literature. Mere alternation then is not sufficient to account for the persistence of a phase as a coconsciousness.

On the other hand Sally does not stand alone as a unique phenomenon. We have seen that B, in the B. C. A. case, also became coconscious when replaced by A or C.¹⁰ These two cases exhibited a phase which manifested itself both as a coconscious self and as an alternating self. In "A Divided Self"—the case reported by Charles E. Cory (Jr. *Abn. Psy.* Oct., 1919) which I have been permitted to verify—the same phenomenon was observed. As a phenomenon it is of frequent occurrence, though not often as a phase of multiple personality. A phase of this kind needs to be studied therefore in both relations. To fully understand the Sally phase, and the same is true of the B phase (B. C. A.), it is necessary to take up this question of autonomous dissociated coconsciousness. To do so *in extenso* would

¹⁰My Life as a Dissociated Personality, Jour. Abnormal Psychology, Vol. III, Nos. 4 and 5. Also, The Psychogenesis of Multiple Personality, Jour. Abnormal Psychology, Vol. XIV, No. 4.

carry us into a wider field of inquiry and anticipate studies to which I shall devote another contribution. We may, however, touch upon it sufficiently to allow us to understand the psychological conditions involved in the genesis of Sally. All experienced students of abnormal psychology have had frequent opportunities to observe and study autonomous coconscious activity and therefore are well familiarized with its various types. They range all the way from sporadic discreet ideas, restricted to very narrow limits and manifested as segregated psychological activity independent of the personal consciousness, to complex systems of thoughts and feelings constellated into a self.

Coconscious activity of this kind is most frequently observed under conditions where alternations of personality are not observed. As a phenomenon it is quite common by itself. It is in cases like those of "Lucie" and Mme. B, made classical by M. Janet, and that of Mlle. Hélène Smith, an unprofessional medium, so beautifully studied by M. Flournoy, that coconscious activity can be observed in its most highly developed form. Indeed the phenomena manifested by mediums, who claim through automatic writing and speech to give expression to the thoughts of spirits and send messages from the spirit world, often present the best examples of autonomous coconscious life. These have been too much neglected by psychologists.

In the simplest cases as, for example, in hysteria, or when automatic writing has been experimentally cultivated, the coconscious idea is some memory which has been dissociated from consciousness, perhaps with a strong affect like fear linked to it, or it may be some memory of a past experience which has been forgotten. Such a memory may be one of childhood or something read or heard; the content of the idea may be of the most diverse nature. In the more complex forms the subconscious ideas may involve an extensive series of thoughts and feelings synthesized into a large system capable of constructive imagination and drawing upon the storehouse of conserved knowledge possessed by the normal self, it may fabricate ideas of considerable originality. It may thus rival in extensiveness of mental processes the primary self. Such a subconscious system then becomes a veritable secondary self, though coconscious, having experiences of its own.

In pathological cases the beginning of such a system is apt to be some strongly emotional experience (memory) which had been dissociated by some psychological trauma (shock), or mental conflict, or voluntary repression. The memory of this experience is conserved

in the unconscious, and from time to time, excited by some stimulus, takes on coconscious activity. In other cases, as with the development of mediums, the beginning may be some idea which has been awakened from its dormant condition in the storehouse of unconscious experiences by experimental or environmental stimuli. Whatever the origin may be, beginning in a small way as a few dissociated ideas, they may undergo a sort of subconscious incubation, rob the personal consciousness of some of its functions and possessions, and by the synthesizing effect of repeated experiences (hysterical attacks, experimentation, so-called séances, etc.) develop into a large egoistic system capable of thought, feeling, and volition.

Such a subconscious system commonly gives expression to its ideas through automatic writing (or mechanical contrivances like the Ouija Board) and speech, or, particularly in hystericals, through other forms of automatic motor phenomena of one kind or another. The system is then entirely coconscious. But it may be made experimentally to replace the primary consciousness which then temporarily becomes extinguished and dormant. When this happens the previously coconscious system becomes an alternating consciousness or self. The method by which this is accomplished is that of external suggestion (hypnotism) or, what in principle is the same thing, that of the subject going voluntarily into the trance state (autosuggestion) as with mediums. In either case the personal consciousness becomes dormant and the coconscious system comes into being and replaces it. The subject will now be found to be in either one or two states: either in the trance state, which is a lethargic condition in which the previously coconscious system continues to express itself by writing or speech, having only control of the hand or tongue, the remainder of the body being in a paralytic condition, corresponding to the dormant personal consciousness, or in the somnambulant state.

In the former state the consciousness present seems to casual observation to be still coconscious because it still makes use of the same methods of expressing itself as it did before the personal consciousness became dormant. As a matter of fact, however, it will be found that the personal consciousness has become dissociated and that there is only one consciousness in existence, namely, that which was previously coconscious. This has, therefore, become an alternating consciousness.

In the somnambulant state, the previously coconscious system becomes enlarged, taking on some of the functions, which it had not

previously possessed, of the personal consciousness (e. g. general and complete muscular control of the body). The somnambulist is then capable of an independent mental and physical life comparable in every way to that of the personal self. This state is commonly spoken of as a secondary self or personality. In other words through the induction of dissociation a previously existing coconscious system¹¹ replaces the personal consciousness and becomes an alternating system. After the alternating phase has become once established and has built up independent experiences of its own, the change from the normal to the secondary phase is readily evoked. There are, of course, other ways by which alternating systems are developed (e. g. B I and B IV);¹² I am only describing the way in which a coconscious system may become alternating. It was in this way, as I interpret the evidence, that Sally became an alternating somnambulistic personality.

THE ORIGIN OF THE COCONSCIOUS SYSTEM

But how did the coconscious system originate, and how did it come to develop? This is the problem with which we are concerned.

We have already seen that as an alternating personality this phase was a secondary system of mental processes, the center of the system being certain complexes, instincts, and innate tendencies which once had belonged to the principal system but which at some early time had been dissociated and conserved as dispositions. The recrudescence of these dispositions formed the nucleus of a secondary system which at first, as we shall see, was solely coconscious. It remains to discover the forces which determined the primitive dissociation and to trace the growth of the subconscious system. We shall find, I believe, according to the evidence at hand, that, as the result of conflicts within the consciousness of the child, ideas at an early date in childhood were split off and segregated as coconscious ideas. Later they received constant increments from the same source from which they derived their own origin. Thus subconscious complexes began to be formed which later became organized into a system. This subconscious secondary system then began to have experiences of its own, in the form of thoughts and perceptions, distinct from those of the primary system, and thus became in time enlarged into a self. The final and accidental emergence in hypnosis of the complete secondary personality was only

¹¹Of course other dissociated states may be induced in the same individual.

¹²An alternating system originating by dissociation of the personal consciousness may later become coconscious, as was the fact with B (B. C. A.)

the awakening by the force of conflict of an already preformed submerged conscious system under favoring conditions. These were a personal consciousness dissociated first by trauma and then further artificially by hypnosis and made dormant. Substantially the same sort of series of psychological events and the same sort of history I have obtained in another case, that of Maria.¹³

The source from which we are obliged to draw for information bearing on the origin and development of a subconscious personality are necessarily subconscious memories. Fortunately we have a fairly full account of these in "the autobiography of a subconscious self" by Sally.¹⁴

According to the memory of the coconscious personality the beginning of doubling of consciousness dates back to the time when the child was learning to walk. "Learning to walk," she writes, "was the first experience of separate thoughts. I remember before this there wasn't anything but myself, only one person." "It was at this time, too, that I was conscious, not exactly of being a different person, but of being stronger in purpose, more direct and unswerving than I appeared, and of being in a certain sense *opposed* to myself. This feeling was much stronger at times than at others. Why, I do not know. Then first began my *impatience* with C., who instead of attending to whatever she might be doing would suffer herself to be distracted by a thousand and one things. For instance in walking, just as I would get interested and eager to go on, down she would flop in a heap to study her shoes, to gaze at the people in the room, or to play with some treasure she had discovered on the floor [curiosity instinct]. Then I was conscious both of the child on the surface, so easily affected and diverted, and of the other child who was years and years older (I insists I was older) and stronger."

Sally, when cross-examined about these statements regarding the

¹³This case has been interestingly studied and reported by Mr. C. E. Cory, ("A Divided Self," Jour. Abnormal Psychology, Vol. XIV, No. 5) through whose kindness I have been able also to study it from the point of view of this problem.

¹⁴The Dissociation; Chap. XXIII. At first disposed to accept with considerable reserve these subconscious memories, the wider my experience with such phenomena, and the more intensive my studies in other cases, the more credence I am disposed to give to them. To-day I am satisfied that this subconscious account is substantially correct in essentials, so far as it goes. The hypermnesia exhibited by subconscious processes is truly remarkable and if evoked under stringent conditions which will exclude artifacts is reliable, as has often been demonstrated. This hypermnesia must of course be distinguished from fantasies and fabrications. It is noteworthy that some of Sally's statements of the forces at work in producing dissociation accord with present day conceptions although she could not possibly have foreseen and therefore have had even an inkling of these psychological theories.

date of the beginning of double consciousness, and asked for specific instances, made the following additional statement:

"She was just a very little girl just learning to walk, and kept taking hold of chairs and wanting to go ahead. She didn't go ahead, but was all shaking in her feet [fear instinct]. I remember her thoughts distinctly as separate from mine. Now they are long thoughts that go round and round, but then they were little dashes. Our thoughts then went along the same lines because we had the same experiences. Now they are different; our interests are different. Then she was interested in walking, and I was too, only I was very much more interested, more excited, wildly enthusiastic. [Instincts of play and self-assertion with emotions of joy and elation.] I remember thinking distinctly differently from her; that is, when she tried to walk she would be distracted by a chair or a person or a picture or anything, but I wanted only to walk. This happened lots of times."

Sally's use of the pronouns "I," "myself," "me," implies a self consciousness pertaining to this separate train of *opposing* thoughts and feelings as if they were systematized into a self at this period. But we need not be misled by this phraseology or interpret it as meaning that such an organized system existed at this time. There is no reason to suppose that these memories indicate the functioning of anything more than emotional impulses linked with particular ideas so far outside the focus of attention as to be coconscious. I have already pointed out¹⁵ that whenever isolated subconscious perceptions and feelings, like the lost tactile sensations of hysteria, anesthesia, and perceptions and images in the fringe of conscious attention, etc., of which the individual is unaware, are recalled afterwards in hypnosis, the hypnotic personality speaks of them as its own, as if the hypnotic self had a self existence at the time of the perceptions. The same is true of the personal consciousness when, as is sometimes the case, we are able to bring back in abstraction the dissociated ideas of absentmindedness. We say *I* thought, perceived such and such things; such ideas occurred to *me*, and that is why *I* did so and so absentmindedly. And yet the recollection represents dissociated coconscious ideas outside the focus of the personal self. I have, also, already pointed out¹⁶ that the secondary personality B in the case of B. C. A. makes a point of this when describing the early rebellious B complex of "floating thoughts, im-

¹⁵P. 395.

¹⁶The Psychogenesis of Multiple Personality, *Journal of Abnormal Psychology*, Vol. XIV, No. V.

pulses, desires, inclinations," which, at first repressed and thereby dissociated, developed later into the coconscious personality B. She insists over and over again that this complex of dissociated thoughts and impulses in no sense was constellated into a self, an "I," although she finds herself obliged to use the personal pronoun in describing it as at the later period it seemed to be a part of her life history. At first it seems to have been little more than conflicting *impulses*. In the case of Miss Beauchamp the hypnotic personality B II made the same distinction in describing the discrete unsystematized thoughts which occurred outside the focus of attention. She likewise insisted that the necessities of language obliged her to use the personal and possessive pronouns I and me in describing them although at the time of their occurrence they in no sense constituted a coconscious self.

In interpreting Sally's phraseology, then, we may rightfully assume that she retrojects her later self or ego into the past when speaking of the beginning of the doubling of consciousness, or, more correctly speaking, assimilates and identifies the dissociated thoughts with her own life history.¹⁷ The first cleavage was undoubtedly in the form of impulses *conflicting* with the impulses of the thoughts that occupied the focus of attention, and the personal pronoun "I" covers no more than this. The former were those of the joy of walking of self-elation and play which tended to carry the act to fruition, the latter of interest in "her shoes," "the people in the room," or some "treasure . . . discovered on the floor," which suddenly entered the focus of attention while in the act of walking. Sally, in her ignorance of the psychological principle of conflicts, merely indicates these conflicts by such phrases as: "I was conscious . . . of being in a certain sense *opposed* to myself;" "my *impatience* with C.;" "she would be distracted by a chair, or a person, or a picture, or anything, but I wanted only to walk;" "I wanted to go farther than she did."

Of course at the beginning these conflicting impulses were only occasional, but it is easy to understand that with the constant repetition of such experiences the conflicting thoughts and impulses would become more and more disaggregated from the dominating personal consciousness, acquire a wider range and gather to themselves other ideas, and form organized complexes. As the child grew older and her habits of thought and traits of character began to be formed the predominating

¹⁷Take B (B C A), however, she never identifies the ideas of the principal consciousness with herself (Cf. *Journal of Abnormal Psychology*, Vol. III, Nos. IV and V.)

conflicting complex appears to have been a rebellion, as in the case of B. C. A., against her own personal attitude of mind and interests. When she was old enough to go to school, for example, the rebellion seems to have been desires and impulses for childhood's pleasures, those of out-door life, and those which her companions were enjoying; while C., (Miss Beauchamp) imaginative and conscientious and serious minded, was interested in literature (fairy stories), her lessons, and her teachers. It was at this time that she "used to spend most of her time curled up in the garret away from everyone, and then she was quite happy with her books and day-dreams and visions."

But the other children, her schoolmates, were having a good time enjoying fun and frolics, and C. felt impelling impulses to do these things too, for as a part of her innate nature she also enjoyed play. "She was awfully fond of out-door things,—climbing, running," etc., but with the cultivation of the intellectual interests she necessarily had put, to a large extent, these childhood pleasures out of mind, had repressed them. But the instincts were all there, conserved, nevertheless. By dissociating an instinct we do not get rid of it. We may control it, keep it in subjection, but it remains, conserved as an innate disposition and may function unconsciously. This conservation of a repressed instinct is well exemplified by the behaviour of the sexual instinct. Though repressed from childhood, and even through years of married life, it may later be aroused into activity with the full force of its emotions and impulses. It is only a question of dissociation and synthesis.¹⁸ And so with thoughts. We say we put thoughts that interest but trouble us or that we cannot bring to completion, questions we cannot solve, *out* of our mind. What we really do, or may do, is to put them *into* our mind.¹⁹ They go into the unconscious or coconscious and there under certain conditions function with happy or unhappy results. In saying this I am not indulging in theory but merely stating the results arrived at by experimental research. By the use of certain technical methods the memory of these dissociated thoughts which have been put out of the mind, and which have become thereby coconscious, can be recovered. So when the child gave up the

¹⁸I fully believe, as the result of observation and experiment, that the sexual instinct is never absent in healthy people of either sex excepting from senility; it is only dissociated when apparently absent.

¹⁹Some of the Present Problems of Abnormal Psychology. (Transactions) "Congress of Arts and Sciences," St. Louis, 1904; also, *Psychological Review*, Vol. XII, Nos. 2 and 3, 1905.

I am not referring to repression in the Freudian sense of intolerable wishes, but in the sense of everyday thoughts that are acceptable, and occupy our interest, though they may involve anxieties and responsibilities we must and properly desire to fulfil.

instinct to play and put out of mind certain thoughts she simply pushed both into the subconscious (unconscious and coconscious).

One of the things the other children, the boys, enjoyed was playing "hookey" or truant. On the contrary C. "liked going to school immensely and used to get awfully enthusiastic over her lessons and over her teachers, but I [the coconscious complex] never cared for either. They were so tiresome and uninteresting." Here were conditions that invited a conflict of impulses. The desire for school was antagonized by the desire for play which had been pushed into the subconscious; so, in spite of this liking and enthusiasm for school she, C., played "hookey" but, strangely enough, against her will. "She didn't want to do it but she did;" and what is more got punished for doing what she didn't want to do. The reason was as with the B complex in B. C. A. the innate impulses to play erupted from the subconscious; there was a conflict and the impulses won. As thus stated you will say there was nothing unusual in this, nothing more than we all have experienced when subjected to temptations, i. e., impulses coming from different sides of one's character. What was unusual was that the impulses came from emotions linked to ideas of which she was not aware, i. e., coconscious ideas. "I," the autobiography recites, "I [the coconscious complex] suggested things to her sometimes by thinking hard. I didn't really do them; she did them, but I enjoyed it. I don't know that I made her; I thought about them very hard. I didn't deliberately try to make her, but I wanted to do the things and occasionally she carried out my thought.²⁰ Most times she didn't when my thoughts were entirely different from her own. Sometimes she was punished for doing what I wanted; for example, I didn't like going to school; I wanted to play 'hookey.' I thought it would be awfully exciting because the boys did it and were always telling about it. She liked going to school. One day she stayed away all day after I had been thinking about it for a long time. She didn't want to do it, but she did. She was punished and put to bed in a dark room, and scolded in school and made to sit on one end of the platform; she was shy and felt conspicuous.

"I always knew her thoughts; I knew what she was thinking about on the platform. She was thinking partly of being penitent and partly of fairy tales, so as not to be conscious of the scholars and teacher,

²⁰The same phenomenon was observed in B. C. A. It is analogous to the phenomenon of post hypnotic suggestion.

and she was hungry. I was chuckling and thought it amusing.²¹ I did not think of anything else except that her fairy tales were silly. She believed in fairies, that they were real. I didn't and don't. At this time she was a little girl. I was there during all the life with J. and at ——— College. I never forced her to do things till lately. Lots of times when she was a little bit of a thing I was angry when she wasn't.²²

The statement in the last paragraph of coconscious joy and anger while the personal consciousness was under the influence of an opposite emotion tallies with what I have many times observed in Miss Beauchamp. Again and again I have seen her features momentarily ruffled with anger, or at least with unmistakable manifestations of anger, while she herself was calm and placid, and, vice versa, her face assume a merry pleased expression while she herself was in a state of anxious depression. This momentary expression could always be traced to coconscious emotions and thoughts which often expressed themselves in automatic speech.²³ I have experimentally obtained the same phenomena both in B. C. A. and Miss Beauchamp.

By this time, at the school age, it will be seen the cleavage of consciousness had become more sharply marked, and the coconscious ideas had increased in complexity and range; they had begun to take on functional activity independent of that of the principal consciousness, and to form a parallel stream of thought; they had their own sentiments, chiefly to play, differentiated from those of the main stream of consciousness. The result was that the impulses from the play instinct erupted from the subconscious and determined the behaviour of the personality. In consequence C. found herself doing things against her will, doing what "she did not want to do," and not knowing why she did them.

The psychological conditions, when Miss Beauchamp as a child found herself doing things against her will, were substantially similar to those described by B. C. A., when that personality found herself

²¹This reminiscence reminds us of the trait, later exhibited by Sally when a full blown coconscious self, of which so many examples have been already given (*The Dissociation*.) I refer to the coconscious enjoyment of Miss Beauchamp's discomforts and of teasing. The latter seems to have had its source in the play instinct as I have already pointed out. The appearance of this trait at this early period is of interest.

²²It is worth noting that this is in entire accord with what used to happen later when Miss Beauchamp was under observation and Sally was a full-fledged coconscious self. The former would find herself doing things she did not want to do and not knowing why she did them. These actions could always be traced to the thoughts and impulses of Sally.

²³For example, p. 275.

doing things she strongly objected to and horrified because she did them.²⁴ The B complex ruled B. C. A. at times just as the Sally complex ruled Miss Beauchamp. Whether the coconscious complexes in the latter were at this early period, of which I am speaking, constellated into an egoistic system, one that can be properly characterized as a self, it is at this late date impossible to say. It does not matter. The principle of coconscious activity is alone of importance. The repressed play instinct and sentiments tended to express themselves and, functioning, to develop the coconscious system.

As the child grew older and became occupied with the moral problems of her unhappy life—serious problems for a neurotic, sensitive, visionary child brought up in an unsympathetic atmosphere—she withdrew more and more within herself and gave herself up to introspection, self criticism, and day-dreaming. Now two consequences followed. The one was the formation of a fixed idea—complex building—which ruled her life and appeared later as the dominating idea in B I; the other was the widening and deepening of the rift between conscious systems of thought to which different and antagonistic instincts were linked. By this rifting the coconscious system became still further developed and separated from the personal consciousness.

The fixed idea was the "saintly complex;" visionary that she was, "she believed that God wanted her to save her mother from some dreadful fate, and that in order to do this she must, before the day should come, have attained a certain ideal state mentally, morally, and spiritually. Everything that came up was tested in its relation to this; she was always fretting about it, always dissatisfied with herself, and fancying that she fell short (as she did)." This impossible ideal haunted her day and night—there was no escaping it. She fancied her mother's illness (the autobiography goes on to state) "had all come because of her; that she had fallen short of God's requirements. She tormented herself, and *me*²⁵ too, night and day with going over, and over, and over, everything that had happened since she was born, thinking this, that, and the other,—that she had not been earnest enough, that she had not loved mamma as deeply as she should, that she had been dreaming away her life instead of acting. It was all rubbish. She had never done anything then." In other words she sought spiritual perfection, not as an end but as a means of obtaining

²⁴My Life as a Dissociated Personality, Journal of Abnormal Psychology, Vol. III, Nos. 4 and 5. Also Vol. XIV, No. 4.

²⁵Note the conflict

something else. This means the *repression* of all other sides to her character, the human sides with their instincts of anger and self-assertion, as well as the play instincts with the joy of youthful pleasures. One effect of this repression was to produce the B I and B IV systems. This is another problem which will be considered in the study of those systems.

Another effect of repression was to push into the coconscious certain ideas which were unacceptable and incompatible with the saintly complex, but which were compatible with the already existing coconscious complex. Some of these ideas consequently became synthesized with this complex which thus became still further enlarged. "Ruled by one idea" the personal consciousness continued "steadfast and unswerving," striving for one end and seeing and interpreting the world about her through this idea. All other points of view and interpretations were disregarded. Persons, scenes, incidents were perceived and interpreted through this idea; "seeing things," as the autobiography says, "always rather through her own thought than clearly and truly." Things *were* seen, however, clearly and truly, but coconsciously, just as things not perceived in hysterical anesthesia may be perceived coconsciously. This expansion and autonomous activity of the coconscious probably would not have happened if another and more effective factor had not been at work to cause a splitting of consciousness; this was her habit of putting herself into abstraction, extreme absentmindedness, or dreamy states. "She used to go mooning about, not knowing half the time what she was doing." In these absentminded states she would be day-dreaming of fairy stories (at an earlier period) or of her fancied sins. One incident indicates the depth of this condition of abstraction; it was the occasion of the death of the baby. "C. had been very restless and nervous during the day, had been scolded and sent to bed several times that evening, but had finally managed to steal unnoticed into the room where the baby was kept to prevent its disturbing mamma, for it cried incessantly. She took it in her arms . . . to soothe it, and after a time it grew quieter; then still more quiet, until finally it gave a curious little gasp and stopped breathing altogether. But C. had not noticed it, for she had entirely forgotten the child in going over and over for the ten thousandth time her sins. She sat there gazing into space until morning, until the nurse came, and for a wonder the nurse wasn't cross. . . . C. did not know until late that afternoon, when she heard

the nurse telling some one, that the baby had died in her arms, although I knew immediately that it must be dead."

Abstraction means not only repression but, it may, be a dissociation, or splitting of the elements of the content of consciousness. Indeed Janet went so far as to explain the peculiar dissociation of hysterical anesthesia with the formation of coconscious perceptual ideas as chronic absentmindedness. Here was a powerful factor making for the splitting of personality and the developing of a coconscious system. In the frequently repeated "dreaminess" the stream of perceptions of the environment, neglected by the one-ideal and absentminded personality, to say nothing of the constant normal stream from the fringe of the conscious field, helped to swell the subconscious reservoir, to form a large coconscious system, independently apperceiving the environment and retaining memories thereof until it became organized into a self with memories and feelings and impulses of its own, and possessing a self-consciousness. At what period this system acquired a self-consciousness it is impossible to say, but it must have been at an early period in youth, about the time the saintly complex began to be formed, and its growth was probably gradual. With dissociation those apperceptions of the environment which were taken in by the personal consciousness and those which were taken in by the coconscious system differed materially. "As a rule," the autobiography states, "in any given scene or incident C. would take in only what might be expressed as the thing itself. C II would be conscious of more details, while I would be conscious not only of the thing itself with all its details *but also of much beside.*"²⁶ I say C II because I do not know how else to express what was in C.'s mind as apart from mine and which she was not conscious of at the time, but which she remembered when hypnotized." It is noteworthy that this memory of these early perceptions accords with the experimental findings at a later period. I was able to demonstrate that a large number of details of the environment were not perceived by the personal consciousness. Many of these were outside the focus of attention (some, indeed, outside the fringe of consciousness). These could be recalled in hypnosis (in the state of B II). They seemed to be simply discrete visual and auditory images, etc., not organized into a system; for instance, those images that occupy the periphery of the field of vision and not ordinarily perceived unless the individual gives attention to this field. They also, however, included details of the objects in the focus of attention. For although

attention was focussed on the objects it was not on the details. For instance, although the personal consciousness would perceive a book in certain relations, it would not perceive certain discolored spots on the cover of the book. In this case the images of these spots would afterwards be remembered in hypnosis (B II) *as having been previously present outside the field of the personal consciousness*. Again when a scene was reproduced experimentally in a crystal vision all the subconsciously perceived details would be pictured in the vision—details, of which Miss Beauchamp had not been consciously aware and could not remember. The perception of the coconscious personality (Sally) would include not only all this but also very “much beside” as the autobiography points out. If the object, let us say, was a person, he would be perceived coconsciously in a different mental setting or context from that in which he was perceived by the principal personality, and thus the perception would have a different meaning to the coconscious Sally. Miss Beauchamp perhaps would perceive a certain person as an important personage, interested in what she was saying, but Sally would perceive the same personage with comical idiosyncracies, with peculiarities of dress, etc., and disinterested, his mind being on other matters and only pretending to pay attention. Sally’s perceptions would probably be at the moment more nearly correct, although there would be truth in both. The difference would depend upon the difference in the perceptions—Sally’s being more complete in detail—and in the settings into which the perceptions would be assimilated. It is in this sense that the statement of the autobiography that the coconscious self was conscious not only of all that the personal consciousness perceived and of details not so perceived, “but also of much beside” is to be understood as I was able experimentally to verify. Exactly the same coconscious phenomena I have observed in numerous experiments with B. C. A. So the two systems in Miss Beauchamp “always saw people differently and hence cared for them in different degrees.”

The effect of repeated experiments of distraction in bringing about a cleavage of the personal system of consciousness I have observed in another case, C. N. This patient for many years has been in the habit of voluntarily putting herself, many times a day, into a deep state of abstraction, or light hypnosis, for the purpose of fixing facts in her memory or of recalling past experiences. She has also indulged the habit with the purpose of deliberately influencing her behaviour and attitude of mind. In this state she puts ideas into her

subconsciousness, i. e., builds complexes in the subconscious which it is her intention shall not be overcome by external influences but shall determine her conduct, etc. In this way she has built up a large subconscious system which emerges from time to time as an alternating personality and behaves also coconsciously.

In the case of Miss Beauchamp the coconscious self thus began to have dissociated experiences of its own—perceptions, thoughts, interests, points of view, feelings, and memories, which necessarily became organized into an independent system. In the beginning of the dissociation in early childhood, so long as the experiences of the two systems were the same, the thoughts of the two ran along the same lines as respects the objects of thought, although the thoughts were different. Later, when the experiences of the coconscious system differed from those of the personal system and their interests differed, the two systems thought about different things at the same time. This became more marked after the coconscious system had become an alternating phase; then, as each phase had a different life temporally and environmentally, each having its own friends, occupations, pleasures, and experiences in general, the experiences of each radically differed. Each had its own instincts, mental attitudes, desires, and impulses. Each phase had its own storehouse of conserved experiences upon which it could draw for thought. When the alternating phase became coconscious it still had access to its own storehouse and thought along the same lines as when an alternating self.

One more factor undoubtedly was at work in the evolution of the subconscious self. I refer to what has been called by James *incubation*. William James, with his remarkable insight into the meaning of things and capacity to open promising vistas for future psychological research, applied this principle to explain the phenomena of sudden religious conversion. He explained these "phenomena as partly due to explicitly conscious processes of thought and will, but as due largely also to the subconscious incubation and maturing of motives deposited by the experiences of life. When ripe, the results hatch out, or burst into flower."²⁷ Or, in other words, the elements of the ethical complexes of ideas which dominate the mind have been deposited from time to time as the result of the day to day experiences of life and conserved in the unconscious storehouse of the mind. The elementary

²⁷The Varieties of Religious Experiences, p. 238. Cf. also The Dissociation, Chap. XXI, The Psychology of Sudden Religious Conversion; also Jour. Abn. Psych., Vol. I, No. 1.

ideas or experiences of course have had their source in early education, the "social consciousness," and the everyday occasional, cursory, fleeting or sustained thought of the individual. They have given rise to doubts and scruples of greater or less intensity leading to conscious conflicts disturbing the mind, and desires unfulfilled. They include motives for the solution of the ethical problems of life. All are repressed, "put out of mind," as with an unsolved problem. Conserved in the unconscious they furnish the formative material out of which the religious belief is to be formed. Such experiences were conscious processes at the time of their occurrence but they were not systematized into a religious belief and linked with the driving emotions required to give a belief force. In the subconscious, however, they undergo incubation, i. e., undergo rearrangement and become systematized with one another and all other experiences which are compatible with them. A subconscious torch, so to speak, to change the metaphor, has thus been manufactured out of the formative material deposited by the experiences of life ready to be set ablaze by a spark when the favoring occasion arises. The spark is some new internal or external experience occurring often in a moment of distraction (dissociation). More literally a conflict arises between the submerged complex and the personal consciousness; the former becomes the victor and the individual is overcome by the sudden emergence of the unconscious complex. The conversion seems to him miraculous in his ignorance of the unconscious processes that have been at work.

That this principle of incubation is general in its application and soundly based on numerous facts of observation and experiment there should be no doubt. I need cite here only those of the unconscious solution of problems—mathematical, logical, literary, social and scientific—and compositions showing a constructive imagination.²⁸ After a problem has failed to be solved by conscious consideration its elements pass into the unconscious where they apparently lie dormant. But active incubation goes on and the solution emerges into consciousness in an apparently mysterious way. The correctness of the principle can be demonstrated experimentally, as when, for example, a mathematical problem is given in hypnosis to a subject who is awakened before the task is undertaken. Later the answer emerges into consciousness according to the conditions of the experiment.²⁹

²⁸I have quite a collection of such stories, verses, etc., composed by subconscious processes.

²⁹Coconscious Ideation, *Journal of Abnormal Psychology*, Vol. III, No. 1.

Applying this principle to the evolution of the coconscious self in the case of Miss Beauchamp, we are entitled to assume that this self was partly due to the "subconscious incubation and maturing of motives deposited by the experiences of life," including in this life both the conscious and coconscious experiences (perceptions, thoughts, etc.). In other words the early primitive dissociated ideas (wishes for pleasure) assimilated much of this material, so much as was compatible with the subconscious instincts and impulses, and the whole became, by a process of incubation, systematized into a self-conscious system. In view of the fact that from a very early date the personal consciousness was in the habit of repressing many of its instincts, natural innate dispositions, and all wishes and thoughts unacceptable to and incompatible with the saintly complex, a rift being thereby made in the unity of the personal consciousness, a large amount of material must have been dissociated and set free ready for incubation and assimilation by the already existing coconscious complex. The active motive in the incubation was the repressed disposition to play—wishes for pleasure incompatible with the serious interests of the morbid child and the saintly complex. These furnished the motive force for the coconscious system.

By way of summary then we may say that the psychogenesis of Sally was due to several cooperative and successively active factors:

1. Primitive early conflicts between opposing impulses—those of the play dispositions and joy versus those of curiosity and possibly fear, leading to the dissociation of the former.

2. Formation later of studious interest and of a fixed idea—the saintly complex—in antagonism with the joyous play instinct and frivolous sentiments, etc. By the force of the former the desire for youthful pleasure, such as "out door things, climbing, running, etc.," of which "she was awfully fond," were further and repeatedly repressed into the coconscious system.

3. Dissociation of consciousness through the force of self-cultivated habits of abstraction (absent-mindedness, day-dreaming).

4. General habit of repressing all expression of inner conflicts and innate tendencies of youth.

5. Autonomous subconscious functioning.

6. Subconscious incubation.

7. General synthesization of the coconscious systems thus formed with the experiences of the alternating phase.

There remains the question, What caused the eruption of the coconscious system as an alternating personality?

It will be remembered that the coconscious system first emerged as an alternating system accidentally in hypnosis. On one occasion, after Miss Beauchamp had been hypnotized a few times, it was found that the usual hypnotic consciousness was suddenly replaced by another and unexpected personality, afterwards known as Sally. This personality, at the time, appeared to have spontaneously and suddenly sprung into life as a new creation, fully developed, without antecedent germination—as something totally unlike the normal Miss Beauchamp. But we have already seen that this was far from being the case and that as a coconscious system it had long been in existence; that it had its germ in dissociated ideas split off far back in childhood; that there had been a gradual coconscious growth, passing through the embryonic period, and a prolonged gestation to reach the full maturity of a coconscious self. Its final appearance as an alternating personality was only the parturition of an already developed subsystem.

How came this system to erupt as a personality after so long being held in quiescence? The explanation is to be found in the principle of conflict acting during an unstable condition. This condition was that of an enormously increased state of dissociation of consciousness. It will be remembered that Miss Beauchamp, although supposed at the time to be an ordinary neurasthenic, was in reality a secondary dissociated personality, B I. The discovery was only made at a later period, but such was the fact. This dissociated personality was again still further dissociated by being hypnotized. The state of hypnosis is, as is well known, characterized by increased suggestibility and diminished resistance to subconscious influences. This is not only a generalization but was particularly true in this case as was evidenced time and again by objective manifestations. In the hypnotic state as well as in dissociated hysterical states to which Miss Beauchamp was subject, the coconscious system easily influenced the personal consciousness and produced automatic phenomena.³⁰ The state of a secondary personality in hypnosis was then a particularly favorable condition for the impulses of the coconscious system to repress the personal consciousness and emerge as an autonomous system. That the impulses of the pleasure loving, childish, coconscious self were antagonistic to and in conflict with those of the morbid saintly personal self almost

³⁰For example compare *The Dissociation; Index: (automatic phenomena, automatisms, etc.)*

goes without saying. They had always been in conflict and they continued in conflict during the six years while the case was under observation. Any stimulus which awakened the desires and impulses of this coconscious self was liable thereby to repress the personal consciousness, push its constellated system into the oblivion of the unconscious, there to remain for the time-being quiescent, while itself emerged as the dominant consciousness. When, therefore, in hypnosis, coconscious Sally came to life, the conditions of the experiment gave not only the opportunity but the stimulus which awoke the desires and impulses which won the victory. Previously the influences of the principal personality had successfully repressed those of the coconscious personality; now those of the coconscious personality were the stronger and repressed the principal personality.

The final fate of Sally is instructive and, I think, confirmatory of the theory of her psychogenesis here exposed. She always insisted that if Miss Beauchamp were made well, if the dissociated systems, B I and B IV, of that divided self were reintegrated into the original single normal self, she, Sally, would, as she frequently complained, "go back to where I came from." What she meant was an enigma until the genesis of this coconscious and alternating self was, as a result of this study, understood. The remark was passed over as being inconsequential. But it is now plain it had deep significance. Sally, from the standpoint of her own knowledge, had an understanding of the case, and an insight into some of the psychological principles of personality, as she frequently demonstrated, which psychologists might well regard. "I thought you psychologists knew this," or, "if you psychologists don't know this you don't know much," she would often comment. Now we see what Sally meant when she looked forward to the fate that awaited her.

With the reintegration of the divided self, the previously repressed desires and sentiments of childhood were repressed once more into the realm of the unconscious storehouse of personality, and not only repressed but *suppressed* by the stronger autocratic systems of the Real Self. Sally "went back to where she came from."³¹

³¹This, of course, requires fuller explanation; but it is out of the question, even if possible, to go into the details here of the disintegration of Sally and the reintegration of the elements of her personality into one psychic whole.

II "THE SAINT" (BI) AND "THE REALIST" (BIV)

Two Alternating Personalities

"THE SAINT"

IN the preceding study of "Sally" I have briefly described the distinguishing characteristics of the three secondary personalities evolved out of the disintegration and reintegration of the elements of the normal personality. To avoid repetition I will refer the reader to what was there said (p. 68). It remains now to make a similar study of the remaining two alternating personalities, BI, the Saint, and BIV, the Realist and practical woman.

The problem of BI is comparatively simple for her characteristics were essentially, on the one hand, an exaggeration of those habits of mind, of the sentiments and settings and systems of ideas and innate dispositions which from the time she was a child she had intensely cultivated and brought to a high degree of sensitiveness and excitability; and, on the other, a suppression of those sentiments and systems, instinctive dispositions, etc., which were directly antagonistic in their conative tendencies to the former systems. The latter had receded from the field of consciousness and ceased to take part in her personality. To understand the traits of BI emerging out of the break up we must envisage those of the original Miss Beauchamp.

1. The Psychological Traits of Miss Beauchamp

It should be recalled to mind that Miss Beauchamp was a dreamy and visionary child,² and these traits persisted during girlhood, up to the time of the shock that caused the split of personality and the development of BI, which occurred when she was 18 years of age. Her life was a lonely one, particularly in the long school vacations when she "used to spend most of her time curled up in the garret away from everyone, and then she was quite happy with her books and day-dreams and visions." Morbidly impressionable, shut within herself and given to day-dreams, she was unduly under the influence of her emotions. She took everything intensely, lived in a land of idealism, and saw the people and the world about her not as they were

²For details see, *The Dissociation of a Personality*, Chaps. II and XXIII.

"clearly and truly,"³ but as they were colored by her imagination. That is to say, she saw people as they were colored by her own ideas which dominated her judgment and tended to be insistent. Even as a child she appeared to have hallucinations, or, at any rate, she so mixed up her day-dreams, and imaginings with reality that she did not have a true conception of her environment. "As a child and as a girl she had been so much alone, so dependent upon herself for the solution of all problems that troubled her, that she had gradually come to be governed by laws of her own making, ignorant of those already existing for mankind." She was the "shut-in" kind. In spite of her dreaminess she threw herself with great intensity into whatever she might be doing or had in mind. These traits might have been corrected if there had been any one interested in doing so; as it was they became habits.

Now there were three concrete expressions of her idealism which affected her life for years to come. One was the logical reaction to the other two. They were three "*sentiments*," each of which had become incorporated in a large emotional setting of idealism which gave an ethical meaning to the sentiment. These were the dominating dynamic factors in her mental composition.

The first was an out-of-the-ordinary very intense religious sentiment which may be termed *divinity worship*. It involved the *Madonna and Christ* as its object. Miss Beauchamp had developed within herself a religious idealism of a high degree which took on a romantic aspect and sometimes expressed itself in mild mysticism and states of ecstasy. When troubled and perplexed she resorted to prayer for aid and consolation, and then not infrequently a vision of the Madonna or Christ brought peace and comfort to her troubled mind and solved her perplexities.⁴ This habit was, undoubtedly, largely due to the condition of her unhappy child life, in consequence of which there was no one to whom she could turn when in need, and she was thrown back into herself. She lived within herself and dreamed. She thus created a very intense personal sentiment for the Madonna and Christ to whom she turned when in distress. This sentiment was one of *love, reverence, admiration and self-abasement*. William James divides human beings into the "tender-minded" and

³The autobiography runs: "She was dreamy and visionary, . . . in seeing things always rather through her own thought than clearly and truly; . . . She holds to certain beliefs and ideas with unwearying patience. It makes no difference that the facts are all against her. It makes no difference that people never or very rarely live up to her expectations. She still ignores the facts, still idealizes the people."

⁴Chap. XXI and Appendix L.

the "tough"-minded. I think we can also divide them, according to the types of their mental processes, into the "mystics" and the "realists." There are more mystics of a mild type than is generally realized. Miss Beauchamp might well be classed as a mild mystic. The vividness of the images accompanying her thoughts, the extreme emotionability and tendency to deep revery, the ease with which she experienced actual visions, particularly of Christ and the Madonna, the ecstatic emotions felt at such times and the feeling of direct communion with these divine beings amounting, I think, to what appears to have been at times the direct knowledge of them—all these experiences indicated the mystic type.

The second sentiment was what I have called the "*Mother-worship*," a similar and related sentiment involving the mother as its object. As far back as the period when she went to school the "shy, nervous, and imaginative" child was "terrified by the appearance of her father," but "worshipped, literally worshipped, her mother," "who," according to the autobiography, "did not however care for her and paid her slight attention." "Her whole life, all her thoughts and actions and feelings centered about her mother." Her mother became her divinity. Perhaps we may say her Divinity was personified in her mother, in that her sentiment for her mother was intimately associated with that for the Madonna; for there is reason to believe that there was much in common in their settings, and that there were organized in both sentiments the same religious emotions, reverence, self-abasement, etc., characteristic of divinity-worship. These emotions with their impulses striving to give expression to the ideas of divinity and motherhood would necessarily determine in many directions her reasoning, judgments and conduct.

The psychogenesis of these two sentiments offers an interesting subject for speculation, but there is no need for the purposes of this particular study—the particular forces and mechanisms which brought about disintegration of personality—of our entering into it and I shall not do so.⁵ We need only deal with the fact that, at this epoch, two

⁵Of course it will be held by the psychoanalytic school that the genesis of the divinity-mother worship sentiments was due to an unconscious infantile homosexual wish—the attachment of the sexual libido to the mother and Madonna. I do not accept this interpretation, as a number of facts, not necessary to cite, warrant another explanation. They may have it so if they wish. The point is that whatever the origin of these sentiments and the large religious setting in which they were integrated, the sentiments once organized and however formed contained in themselves their own driving forces, or urge (derived from their emotions) which enabled them to act as autonomous psychic wholes and determine behavior. As such psychic wholes they could and did, according to my view, dominate the character, enter into conflicts, and produce various phenomena as will appear.

closely related sentiments had been organized, had attained to a large degree the hegemony of her personality and, therefore, were capable of determining behavior and reacting as organized psychic wholes in an autonomous fashion to conflicting impulses. In other words these organized complexes were capable independently, of themselves, regardless of any hypothetical subconscious motives, of entering into mental conflicts and disrupting the personality.

The third concrete expression of her idealism was an idea of self as the object of a sentiment which may be defined as *saintliness*. The most obtrusive instinct organized with this idea was that of self-abasement of which the emotion is negative self-feeling (Ribot) or self-subjection. This instinct was contributed to the idea of self by the "self-regarding sentiment." For the idea of self regarded as a complex, or integrated whole, has, according to this theory, structurally organized within it this sentiment in which two opposing instincts, self-abasement and self-assertion, are incorporated by experience, but either may be the dominating one. McDougall has argued, and I think soundly, "that the idea of self and the self-regarding sentiment are essentially social products; that their development is effected by constant interplay between personalities, between the self and society; that, for this reason, the complex conception of self thus attained implies constant reference to others and to society in general, and is, in fact, not merely a conception of self, but always one's self in relation to other selves." But, as I shall argue later when considering the Realist's conception of self, (p. 120) this formulation must be considerably broadened. Every sentiment (and therefore the self-regarding sentiment) has roots in and is consequently related to many dispositions deposited by the experiences of life; it is related to what has gone before. And the experiences of what has gone before of the self, i. e., what has been previously experienced (ideally or realistically) by the individual in reference to the object of the sentiment, determines the attitude of mind and point of view towards that object, and is responsible for the organization of the object and emotion into a sentiment. The sentiment is the resultant and the expression of those antecedent experiences. They form its setting and give it meaning beyond the mere emotional tone. You cannot separate sentiment, conceived as a linked object and emotional instincts, from such a setting. They form a psychic whole. This is not only theoretically true, but actual dealings with pathological sentiments (in which the principle can be most clearly studied), called phobias

and other emotional obsessions, bring out this intimate relation between the sentiment and the conserved setting of antecedent experiences. Such practical dealings also show not only that the sentiment is the outgrowth of and the expression of this setting, but that by changing the setting the sentiment can be correspondingly altered. I am now little more than repeating what I have said above in the study of Sally. But I want to emphasize that in the dynamic functioning of a sentiment the setting cooperates in maintaining and carrying it to the fruition and satisfaction of its aim.

The content of Miss Beauchamp's idea of self was derived from an ideal of perfection inspired by religious teachings and exemplified by the Madonna, and, therefore, closely associated with the other two sentiments just mentioned. This idea of self was thus referred to not only an object of the environment (society), her mother, but to God, Christ and the Madonna and religious ideals, so that her conception of self included her conception of her relation to Divinity.

Such a conception would be motivated by several emotions—love, self-subjection, awe, reverence, etc. And this ideal she strove to reach in her own person by artificially moulding her character to correspond and incorporating in her idea of self the concepts of moral and spiritual perfection and obedience to God's wishes. The sentiment thus became set in a context of religious ideas (experiences) forming an organized psychic whole which gave meaning to it as the fulfilment of the Divine Will, etc. It naturally followed that this volitionally cultivated idea of self largely governed her conduct at this time.

The motive for this self-cultivation of perfection was not at first religious but related to her mother.

For some unexplained reason she conceived the idea that some calamity was hanging over her divinity; "She believed," according to the autobiography, "that God wanted her to save Mama from some dreadful fate, and that in order to do this she herself must, before the day should come, have attained a certain ideal state, mentally, morally, and, I think, spiritually. Everything that came up was tested in its relation to this; she was always fretting about it, always dissatisfied with herself, and fancying that she fell short (as she did)." "This impossible ideal haunted her day and night—there was no escaping it, although . . . it was not perfection as an end that she strove for, but perfection as a means of attaining

something else." This something else being the saving of her mother. And so she set about perfecting herself in saintliness for this purpose, repressing all the thoughts, ideas, feelings, and instincts that were incompatible with her ideal, and cultivating those that led to ethical and religious perfection. These notions so ruled her that when her mother fell ill—the illness from which she died—the child fancied, the autobiography goes on to state, that it "had all come because of her; that she had fallen short of God's requirements. She tormented herself, and me, too, night and day with going over, and over, and over, everything that had happened since she was born, thinking this, that, and the other—that she had not been earnest enough, that she had not loved Mama as deeply as she should, that she had been dreaming away her life instead of acting. It was all rubbish. She had never done anything then." In other words it was all her fault that her mother was ill; her mother was suffering because she, the child had failed to attain perfection.⁶ Here was self-reproach with resulting conflicts but it does not appear that at this epoch the latter gave rise to pathological consequences beyond the repression of normal instinctive tendencies and ideas of child life.

This complex sentiment of saintliness, which had been cultivated for years, later, when the disruption of personality occurred as the result of conflict, emerged, as we shall see, and became the dominating characteristic in one of the secondary dissociated personalities (BI). Then, becoming freed from the controlling influences of counteracting and balancing ideas motivated by other instincts, it ruled her conduct and, as a character trait, became developed to a degree that seems almost unbelievable. For to the mind of this later emerging dissociated personality BI, The Saint, disobedience, selfishness, impatience, distrust, rudeness, uncharitableness, unforgivingness, anger, a failure to

⁶This attribution to one's self of the fault of a calamity occurring to a loved person is not uncommon, as we know in every day life. In a morbid unreasonable child-like form I have observed it with pathological consequences in another case. The subject when a child attributed the death of her mother and of her brother to the fact that she had neglected to pray for them at the times of their respective fatal illnesses. There resulted a persisting fixed idea that the deaths of these relatives were her fault, and consequent self-reproaches. The original complex, for the most part, remained unconscious, but during the course of her life, even to a late period, it absorbed into its setting (which gave a meaning to her idea-of-self) the common events of everyday life, to a remarkable degree and affected her happiness and conduct. Everything unfortunate that happened, or might happen, was apt to be judged as due to her fault, in almost a superstitious way. It required the methods of hypnosis and automatic writing to trace the obsession to its original childhood source. By changing the setting and therefore the view point, the cure was effected. (For report of the case see *Journal of Abnormal Psychology*, Vol. VIII, No. IV, "The Psychopathology of a Case of Phobia: A Clinical Study." Also, "The Unconscious"; Chapter xiii).

tell the truth or a suppressing of half the truth, were literally sins and their manifestation wickedness to be cast out by fasting, vigil, and prayer. But I am now speaking of a different and an earlier formative period.

Her mother died when she was thirteen years of age. Then followed a period of five years between that event and the shock that caused the disruption. The first three of these, when she lived with her father, were characterized by nervous stress and strain, a succession of nervous shocks, frights and unhappiness. At sixteen she ran away from home and never saw her father again. Thus ended the first hystero-genetic period.

It must not be thought that during the succeeding five year epoch mentioned, and particularly the last two, that Miss Beauchamp was yet a saint, or, if you will, even a religious prig. After her mother's death and more especially after running away from home she had come under other influences that allowed free play to the expression of her whole personality—to her idealism, to her love of intellectual culture, to her practical adjustment to reality, to her play instinct. In other words there were other sides to her character and these other sides found, to a certain extent at least, expression. Thus, for instance she took part in more than one youthful, but harmless, escapade, even to donning boys' clothes on several occasions in search of adventure and giving vent to her play instinct. She was "an original" fast enough and a new life had come to her. On the other hand, in adjusting herself to reality, her practical side came into activity and found expression as a nurse in a hospital where we find her when the catastrophic disruption of personality occurred. Emancipated from the old environment and conditions of life, and their hystero-genetic forces, she had become relatively normal though probably still somewhat psychasthenic. Nevertheless the artificially cultivated sentiments either still persisted or left their conserved dispositions, organized as unconscious residua, ready to be awakened by an appropriate stimulus.

The divinity-worship persisted, as did also the mother-worship, but in an altered form. While the sentiment of self (saintliness) determined the character of the resulting personality emerging out of the psychological wreck induced by the shock of conflict, the sentiments of divinity-worship and mother-worship played the principal part in causing the conflict and break up. For after her mother's death, another person, known as J—— became incorporated in the mother-

complex, substituted if you like for the mother, and thereby invested with the same emotions.⁷ J—— in turn became her human divinity, and in a way personified the closely associated and integrated sentiment of divinity worship, for he became in her mind invested with many of the heavenly attributes of perfection and of a superior being. Indeed coming into her life in the time of her distress, she conceived him to be a "heavenly messenger" sent to her in her affliction. Here was an earthly person, a living human being, one of preeminently fine character, culture and ability to whom the shut-in child could turn at last. Save to the Madonna and Christ, never before could she turn to any one. Her mother had disliked her although the child was not consciously aware of the fact. Coconsciously she knew it and of the reason why,⁸ and to the mother the child, yearning for a mother's love, never turned. And so the one person who brought aid, and comfort, and happiness, into her troubled mental life and who alone gave opportunity to her longing for self-expression—that imperious demand which if unsatisfied results in individual and social unrest—became invested with the emotions of reverence and self-abasement and was actually felt to be a heavenly messenger, a personification of the divinity sentiment. It was when this ideal came later into conflict with the realities of life that there followed a shattering of the mental structure. Thus in one direction or another her whole life until recovery occurred and she became adjusted to reality, was largely governed by this sentiment.

Before attempting the study of the mechanism of this disruption, itself, of the personality and the conflicting forces which occasioned it, it will be well to consider the effect of the formation of the sentiments I have described upon the personality as it existed at the age of thirteen, during the mother's lifetime.

⁷Later other persons successively became the objects of this divinity sentiment—became her "divinity."

⁸In this knowledge we have a clue to the genesis of the seeking for saintly perfection. Quite possibly, if not probably, the child *consciously* demanding the mother love and *subconsciously* being aware of her dislike, there was a subconscious wish or motive to overcome this dislike. The natural thought of a child would be to attain this wish by being "good," i. e., attain moral perfection. But how could the subconscious motive induce the person's consciousness to seek this end in this manner without a conscious motive, seeing that the child was not consciously aware of the maternal dislike? If we assume that the unhappy marital relations suggested some unhappy fate for the mother and that there was a natural conscious wish for divine assistance or intervention (in such conditions religious people almost "instinctively" turn to God, as did this child), the subconscious wish could, through communion with God, easily convert itself into the idea of a *divine* wish that the child should be good (attain saintly perfection) to save her mother. Thus the subconscious wish to win her mother's love appears in consciousness through rationalization in a disguised form as God's wish that she *save* her mother from a "dreadful fate." But this, of course, is largely speculation although based on facts.

The building of such sentiments involved two processes—one of synthesis, the other of dissociation or repression. The former consisted in the organization about the objects of the sentiments the innate instinctive emotional dispositions appropriate for the sentiment. These emotional dispositions have been already described—love, reverence, self-subjection (submission), etc.

The impulses of these dispositions not only tend to carry the ideas of the sentiment to fruition, but to repress and suppress the impulses of the antagonistic instinctive dispositions and the sentiments in which they are organized. This is the second process. If this were not so, a sentiment or ideal would not be effective in determining behavior. There would be constant conflicts of impulsive wishes; and which would get the upper hand and determine the character of the personality would always be a matter of doubt. We might have a vacillating and an oscillating character, such as so often is met with, never fixed, but first governed by one ideal and then by another. When moral issues are involved such characters oscillate between good and evil impulses—weak characters we call them. For a sentiment to dominate the character, for Kant's "categorical imperative" to take control, antagonistic impulses must be repressed and suppressed. Hence it was that in the successful building up of the three dominating sentiments in Miss Beauchamp's character,—saintliness, divinity-worship, and mother-worship—the opposing innate dispositions and tendencies and the sentiments in which they were incorporated were repressed. Thus *self-assertion and pride* were repressed and suppressed by the impulses of self-abasement (submission). And likewise, by the conative forces of the other cultivated emotional dispositions, it resulted that *anger*, the disposition to *play*, *jealousy*, *hatred*, *ingratitude* and other compounded emotions, and the sentiments formed with them, were suppressed and cast out of her character. This so long as the three dominating sentiments were successfully cultivated.

We shall see what happened when the disruption of personality occurred, and what were the forces which brought it about.

2. The Emergence of the Saint, BI

Miss Beauchamp, notwithstanding a certain degree, perhaps, of hysterical instability that may have existed, was, at any rate, a practical unity, an integrated single consciousness from at least the time of eloping from home to the summer of 1893 when the catastrophe occurred. Whatever co-conscious mentation (later synthesized and

emerging as "Sally") may have gone on, it did not practically affect the unity of the personality. At the time she was following the vocation of a nurse in a hospital, a vocation for which she had for long had an idealistic longing.

The shock occurred during a dramatic interview at the hospital door in the setting of the darkness of night and a terrific thunderstorm, with peals of thunder and flashes of lightning which at intervals lit the face of her companion and revealed expressions of human feeling. Her companion was her "divinity"—the "Heavenly messenger," who had been the object of her sentiment of reverence, self-subjection and gratitude. We must keep this in mind if we would understand the psychical trauma. In her mental complexes he was one to be worshipped as a being of a superior order. Much older than she, he was the embodiment of the spiritual and the ideal and not to be thought of in ordinary humanistic relations.

What happened was this, according to the testimony of the different personalities. Its emotional significance may be best understood through the vision by which it was reproduced in the mind of BIV. (This personality, be it remembered, had amnesia for the episode, her memory for her life ceasing just before its occurrence and beginning again only at the moment of her emergence as a personality six years later).⁹

To obtain the vision I said:

"Fix your mind [for a vision], and *see* whether you saw him again that night." She looks straight forward and falls into a dreamy state. "I have got it, Dr. Prince. It is curious. I see there are two. No, I don't get it." [Then, much agitated, and withdrawing from what she sees]: "No, it is impossible! No, it is not true! No, no, no! I see nothing true! I hear nothing!" [She shrinks as if in great mental distress]. I urge her on, saying, "Look, you see yourself outside the hospital." She repeats again, "It is not true! That did not take place! I see nothing true! I hear nothing true!" She continues denying and resisting. I insist, though she seems in mental anguish, as if re-enacting what is before her. She again "fixes" her mind, and apparently follows a scene. "I can see two—[a pause] No! I would tell you if what I see were true! We separate—[a pause]. No. I can't tell you!"

"Do you see yourself?"

"Yes, I see myself."

"With whom?"

"Jones; but not like himself. All is dark except for the flashes

⁹See p. 223

of lightning." She seems abstracted and answers dreamily: "It is not Jones at all,—his face is all drawn, and he is very much excited." Then, coming more to herself, "He was very nervous and excited—not like himself—and as I saw myself I seemed so, too. It was dark, and lightning flashes lighted up my face and his. I was frightened."

"Where were you?"

"It must be outside the hospital door. I am absolutely sure it is not true. The vision is gone. It was all very horrid. I don't like visions like that. It never happened. [Looking again]. I can't tell you more. No, I can't hear anything. Now, I see only the trees. He seemed perfectly mad. [She shrinks and shudders]. Don't ask me to tell you more; I can't!" [She moves her lips inarticulately, as if physically unable to speak (aboulia?) and I allow her to come to herself]. . . .

Sally now bounced into existence, highly excited, and began vehemently to contradict B IV's statement that the vision "was not true." "It is true. It is true," she exclaimed. Then Sally, *while thinking about the vision*, became sad, dreamy, and depressed; then suddenly changed back to B IV, who said the vision had come again but that it was not true.¹⁰

The veridity of the facts revealed in this vision was confirmed by the memories of the other personalities BI and BII (the normal reintegrated self) as well as by Sally.

This traumatic episode had for a consequence two revelations; one actually known, the other more or less inferential. The first was the intellectual revelation that her "divinity" was, after all, no "heavenly messenger" but only mortal, and the realization of this fact—nothing very extraordinary in itself—was the disillusion of her ideal. The second, somewhat inferential but one which I have strong reason for believing, was a revelation of herself to herself. It was the awakening of previously dissociated sexual emotion. Rightly or wrongly, in the, to her, excited features of her companion she thought, at least, that she recognized this emotion, and she herself probably momentarily experienced manifestations of the same instinct without realizing their meaning. This accounts for her intense *horror*, *aversion*, shrinking and agitation, and the force of the two disillusionments—the discovery of the human side of her divinity on the one hand, and of her own sexual nature on the other.

The effect of these two revelations was twofold: first the awakening of the two instincts, repulsion and flight, with their strong impulses and emotions of aversion and fear. We are not obliged to

¹⁰Pp. 220-222.

imagine, or depend upon the statements of the subject for, the complex emotional state that ensued, for in the crystal vision of the scene it was reproduced and lived over again and exhibited in a dramatic form before my eyes.¹¹ In both the original scene and the reproduction she was horrified by the revelation and this feeling was heightened by the dramatic situation in which the scene occurred and which was reproduced.

In another and older person the reaction to the revelation of the facts probably would have been different. That to the first disillusionment might have been anger, and self-assertion coupled with aversion. But the pugnacious anger reaction and that of self assertion had long been repressed and dissociated. That to the second disillusionment, the revelation of herself to herself, might well have been submission to the force of the awakened sexual instinct. In this young divinity-worshipping soul, in whom the instinct of self-assertion had long been suppressed, there was special danger of such submission owing to the domination of the contrary instinct of self-abasement sedulously cultivated. In face of this danger the first defensive reaction, therefore, was a composite of the two instincts fear and aversion—and she fled, horrified.

The secondary effect of the two revelations, after a period of incubation, may also be called a defense reaction if that aspect of such reactions appeals to you. This was the later awakening and bringing into dominance once again of the conflicting saintly complex, the evolution of which by cultivation and its hegemony during the life time of the mother has been described.

This did not occur immediately but only gradually, after a period of so-called incubation, in the course of a week. Such a period, as we know by experience, is common in the hysterical psychoses. During this week the saintly complex, awakened by the experiences she had just gone through, came to the rescue of her anguished mind. And necessarily the processes of repression and dissociation of antagonistic sentiments and tendencies by the force of the impulses of the emotions organized in the revived complex began to get in their work. Impelled by the instinct of flight (and fear) she fled, and broke off

¹¹"This vision occurred spontaneously several times. I want to say again that I do not believe that what occurred justified socially the intense reaction on the part of Miss Beauchamp, or that today in her normal condition the episode would appear to her as anything very extraordinary. It must be remembered that the subject was then dominated by an extravagant ideal and the saintly complex, and saw things, "not truly as they were," but only through the ideal which exaggerated or distorted the perceptions.

(probably unjustly and unreasonably) all relations with the person who was the cause of her distress. She refused to answer or read explanatory letters, she avoided the society of others, and, so far as her duties permitted, alone by herself walked the fields by day and the wards of the hospital by night, brooding over her twofold disillusionment.

The flight from the cause of the trauma was identical in principle with the psychological flight and shrinking of the "shell-shocked" soldier from the dangers of the trenches. And in the one case as in the other the revival, even in memory, of the experiences which caused the mental trauma reinduced the same emotions—hysterical stigmata.

Thus stimulated into activity, the saintly complex, or idea of self in relation to God, occupied the content of consciousness to the exclusion of all else in her broodings. Under the domination of this idea with its powerful emotions (love, reverence, awe, subjection, etc.), not only the sexual instinct but all the instincts and sentiments opposed to it and incorporated in the realistic side of her character became unacceptable and intolerable. They were therefore repressed and dissociated. So likewise was it with the instincts of pugnacity and self-assertion and play and others which were also repressed.¹²

What became of the sentiment of divinity-worship of the "heavenly messenger?" Was it repressed? Not at all. By the new experiences of the 1893 shock the setting of this sentiment was altered, the old roots were thereby killed, new roots were established, *a new point of view created*, and *the sentiment was disintegrated and killed*. The "messenger" became just an ordinary mortal as seen from the new point of view. This is precisely what happens in the cure of a pathological sentiment (obsession) by whatever therapeutic method it is accomplished.

¹²Described in everyday language without psychological technicalities all this might be told in very simple words. Her reactions were not very different from what occurs to any one who has received an intense emotional shock from the revelation of a truth which has come in conflict with and shattered his previous expectations, hopes, or ambitions. Under the influence of a great grief from the loss or disgrace of a loved one, or overwhelming anxiety over an inevitable calamity, or even violent anger from an affront, the average person withdraws from his social environment; his mind is dominated by his emotion; a single group of ideas, representing the painful memories of his disillusionment and his present situation, occupies his mind to the exclusion of all else; to these ideas and affects he gives himself up, perhaps nursing and worshipping them; all his previous ideals and other counterbalancing thoughts and points of view and feelings are excluded from his consciousness and thereby dissociated. Those instinctive processes with their emotions which are incompatible with those which overwhelm and direct his personality are necessarily inhibited. Such a person, for the time being, is in an acute dissociated state. We recognize this fact when we say he is shaken by his grief, or whatever the shock may be, and say, give

Thus by such mechanisms there was a reawakening of the dominating complexes of her former self and a reversion to that self. But there was more than this. There was by the force of conflict a suppression of all antagonistic complexes and tendencies and therefore of the realistic side of her character. There ensued a change of personality which included an exaggeration and intensification of her former self. Thus she became B I, the Saint.

THE REALIST, B IV

The genesis of B IV, the Realist, is a much more difficult problem than that of B I. To understand the psychological mechanism that came into play one ought to be familiar with the principle and the phenomena of *displacement* and *substitution*. By this principle a particular complex, or system of complexes, is crowded out of, i. e., disintegrated from the personal consciousness and another previously dormant complex, or system, is substituted for it. This is effected by an appropriately attuned stimulus, a conflict and repression. Of course it is a normal phenomenon of everyday life and the principle governs many of the changes that daily occur in the hegemony and consequent behavior of normal personality. It is exemplified, for example, in changing *moods*. But in pathological conditions it is often seen in sharply outlined concrete form and its resulting manifestations are manifold. The solution of the problem of B IV which I offer involves this principle. But before touching it let me rehearse briefly the historical facts.

It so happened that the first appearance of B IV occurred in my presence. Miss Beauchamp in the personality of B I had lived

him time and he will "get hold of himself"; or, "regain himself." It is also popularly recognized that the condition is an hysterical one. But it is only an acute dissociation with an obsessing idea.

As times goes on he follows one of two courses; either, as most commonly happens, he awaits the effect of time, the painful emotions begin to lose their intensity, the memories begin to fade and be less insistent; the repressed systems emerge again and the person "becomes himself again," in full possession of his former interests, tendencies, and instincts; or, he turns for defense against the painful memories to some interest that has counter impulses and emotions. In a change of occupation or scene he finds new pursuits and interests, and gradually readjustment of his disturbed equilibrium takes place. If the person is a woman and, like Miss Beauchamp, has deep religious traits, she is likely to turn to religion for solace and compensation, and to find relief in prayer and communion with God. Her mind is then dominated by religious ideas to the exclusion of the realistic side of her character. In mediaeval times such persons often entered the cloister as a refuge where, isolated from the world and associations that would keep alive the painful memories and their conflicts, they pursued their new religious interests and the disrupted personality was again established. In psychopathic individuals like Miss Beauchamp the reaction to an emotional "shock" is often extreme; the synthetic restitution of the dissociated elements fails to occur and the condition then becomes prolonged and chronic as a state of hysteria.

a continuous existence for six years.¹³ One day, shortly after leaving my office in good condition she suffered an emotional "shock" of the following character. She had received a letter, the tone and language of which recalled the scene on the memorable night of August, 1893, when she received the shock which had changed Miss Beauchamp to B I. It brought the whole experience vividly back to her. She became highly nervous and excited, and then and there *had a vision of the scene when she met the writer of the letter outside the hospital door. She could hear his voice speaking as he did then; and the emotional whole—the letter, the hallucinations and the memory—*gave her an overwhelming shock, agitating her as she had *been agitated six years before. She was profoundly moved and upset.*¹⁴ This was accentuated by a second shock received a few moments later from misreading the headlines of a newspaper probably through a hallucination. After returning home her mental condition was such that even coconscious Sally became alarmed, wrote her a letter correcting her delusion to calm her and sent for me. Visiting her a few hours afterwards I found her in a condition of intense nervous agitation, fatigue, depression and reticence, such as indicated great mental strain. She scarcely spoke, answering questions only in monosyllables. She was, as afterwards transpired, (p. 226) in a semi-delusional, if not "twilight" state. Suddenly, and without apparent cause, an extraordinary change came over her. She became tranquil, natural and apparently normal and sociable.

It was a new personality, B IV.

1. Character Traits of B IV

Let us study the character of this personality from the point of view of innate and acquired dispositions. B IV in most respects was the antithesis of the Saint, and properly may be called the Realist. She had individual peculiarities of character, of disposition, of temperament, of tastes, of habits, of memory, and of physical health, which sharply distinguished her from B I. Even many of her physiological reactions to the environment were different.¹⁵ But the points

¹³Excepting, of course, for the interruptions due to the emergence of the subconscious Sally during the last year after coming under my observation, as already described.

¹⁴The emotional effect of this letter may be gathered from the effect produced on the normal whole personality in hypnosis (B II) when I put the question to elicit a memory of the occurrence. At once she was thrown into a state of terror, shrinking from me as one might from a horrible dream. Her mental distress was manifested in her features. (P. 225.)

¹⁵A large number of these contrasted traits peculiar to each personality have been tabulated and are worth studying. (P. 288).

of chief interest for us now are that a number of the emotional instincts and other innate dispositions which were dissociated from the personality in the synthetic composition of B I, left over, so to speak, were gathered up and retained in that of B IV, while, vice-versa, certain ones which, we have seen, were retained and extraordinarily active in B I were dropped out in the construction of B IV. And correspondingly certain sentiments for which the lost emotional dispositions were essential constituents were respectively absent in one or the other; and even the same object was sometimes organized with a different set of emotions in each, giving rise to different kinds of sentiments in regard to it.

Thus the *instinct of self-abasement*, which was so dominating a characteristic of the Saint, was entirely left out of B IV; while on the other hand the opposing *instinct of self-assertion*, dissociated from the saint, was retained in B IV and was an equally dominating characteristic. Correspondingly the *idea of self*, incorporated with the "*self-regarding sentiment*," was organized with self-abasement in the saint and with self-assertion in the Realist, B IV. In consequence the former was submissive to the degree of humility and dependent on authority while the latter was self-assertive, independent, self-reliant, masterful, and resentful of control. McDougall with keen insight and analysis, has argued that the self-regarding sentiment is organized with these two innate dispositions, but in different degrees in different individuals, and with the growth of the mind one may replace the other in the adaptation of the individual to the changing environment. Taking two extreme types, he draws a picture of the proud, arrogant, self-assertive, domineering person, with the feeling of masterful superiority and angry resentment of criticism and control, and who knows no shame and is indifferent to moral approval and disapproval. In this personality the instincts of self-assertion and anger are the dominating innate dispositions of the self-regarding sentiment. On the other hand we have the type of the submissive, dependent character, with a feeling of inferiority, when the contrary disposition is the dominating one. McDougall's analysis was beautifully illustrated by these two personalities, fragments of the original self, which were actual specimens from real life of his theoretic types. Again McDougall's theoretic analysis of the conception of self, showing the idea to be one "always of one's self in relation to other selves," is concretely illustrated and substantiated by the dissection of this mind effected by trauma. But, as an important addition to this theory both

from a structural and dynamic point of view, I would insist, again, that the complex conception of self includes a setting of mental experiences of much wider range, in which the idea of self is incorporated and which gives the idea meaning. The range of this setting extends beyond other "selves" and may include almost any of life's experiences. Concretely and more correctly the psychological interpretation of the "reference to others and society in general," of the relation of one's self to other selves, would in this particular instance be as follows: The Saint's conception of self (with the self-regarding sentiment) was related to an ideal world and ideal selves contained in religious conceptions; and hence it became organized in a larger setting which gave it a meaning of divine perfection such as is obtained, or aspired to, by saints, and in which were incorporated the emotional dispositions of awe, reverence, love, self-abasement, etc. This conception was not a product of, or related to the social environment. Rather it was the product of an ideal world. She, as has been said, lived in a world of idealism, oblivious of the realities round about her, which she saw not "clearly and truly" but as they were colored by her imagination. Her idea of self thus became the "saintly sentiment" of self-perfection.

On the other hand the conception of self of B IV, the Realist, was related to and set in the realities of this social world as they clearly are, the world of her objective environment. And in this conception of self the instinctive dispositions of self-assertion and anger contributed the promptings and motive force to dominate these realities and bend them to her will. Corresponding to this conception it was the persons and conditions and affairs of actual life that touched her interest rather than religion and the church to which she was antipathetic. This relation of this self to the actual world of realities is *displayed in certain corresponding traits* which were manifested by B IV and which were absent in B I, who exhibited diametrically opposite traits *corresponding to her own conception of self*.

Thus the former never voluntarily entered a church nor read devotional books; the latter was very fond of church and read many devotional books by preference.

The former with an eager interest in general affairs of the world devoured newspapers; the latter never read them and cared little about what was going on in the world.

The former delighted in meeting new people;¹⁶ the latter was

¹⁶Possibly the herd instinct took part in this trait.

morbidly averse to them and confined herself to old friends who belonged to her world of idealism.

The former, who read very little, as a realist preferred books dealing with facts; the latter, who read a great deal, as an idealist loved books of devotion, poetry and novels in which she could live in a world of imagination; and so on.¹⁷

Similarly corresponding to the instinct of self-assertion incorporated in the self-regarding sentiment of B IV and to the instinct of self-abasement in that of B I could be traced respectively in each certain logically resulting traits. For instance the former self was extremely self-reliant and self-assertive; the latter very dependent and submissive.

The former exhibited the vanity of a consciousness of superiority and felt she was quite capable of running the world; the latter was free from such vanity and conceit.

The former was unwilling to take advice or submit to control; the latter was ready to take the one and submit to the moral help of the other.

The former had an indomitable will and obstinacy, if only to have her own way; the latter was easily influenced and yielding.

The former was selfish in that she only considered herself and her personal convenience; the latter was the exact opposite, always considerate of others.

It will be remembered that the saint was absolutely devoid of the instinct of anger. But the innate disposition was not absolutely *suppressed*; it was dissociated only and switched off from the personal systems of B I and on to those of the Realist. It followed the principle of *switching*. In B IV anger was a paramount instinct and gave rise to traits that obtrusively distinguished her; so much so that I frequently used it as a test to recognize which personality I had to deal with. I would make a remark which would, as I knew, be accepted submissively by the Saint, but if the Realist was before me, the tapping of the foot on the floor, or the compression of the lips would betray the boiling anger within that was hers.

Thus it was that B IV was quick tempered and subject to violent rages which nothing could restrain; while B I was amiable, even tempered and never angry:

¹⁷For a tabulation and discussion of the distinguishing traits of character see Chapter XVII

That B IV was rude if opposed and apt to be intolerant at all times; but B I never:

That B IV was quick to take offense and to retaliate; she wore a chip on her shoulder, while B I never took offense:

That B IV fought Sally day and night, while B I never quarreled with Sally, no matter how deeply she suffered from her tormenter.

This "switching" of an organized disposition is beautifully illustrated by the transference of *acquired* dispositions from the personal system of one phase to the other. For instance, there were times when the knowledge acquired by B I through study, such as French, Latin and shorthand, was lost by B I but switched on to B IV, who conversely did not possess it if possessed by B I. Likewise what was learned by B IV was often not possessed by B I unless lost by the former; it was thus switched off from B IV and on to B I. What forces brought about this switching was not inquired into. It may well have been some kind of conflict, for conflicts were in continual operation between the two systems.

The presence or loss of the chief *innate dispositions with their emotions* has been tabulated in the preceding study of Sally. To this the reader is referred, but a few words may be added about one or two.

Sympathetic innate tendencies: Without stopping to inquire into the somewhat difficult problem of *sympathy*, but assuming that this is equivalent—to use McDougall's phrase—to the "sympathetic induction of emotions" and that it requires a specialized innate mechanism, there was a marked difference in the characters of the two personalities in this respect. The saint, as might be expected from such a character, was intensely sympathetic. The joys and sorrows, the pain and suffering of others induced the same lively emotions in herself, while the Realist remained apparently unmoved. I say apparently for, as will be presently told, she so objected to the idea of being that sort of person that she repressed and suppressed such emotions with might and main. At any rate the difference manifested itself practically in different and opposing traits. For instance:

B IV hated illness and had a morbid horror of everything connected with it; while B I loved to be with people who were ill and suffering.

B IV hated charitable and altruistic work, visiting and reading

to invalids and old people, visiting the poor, etc.; B I loved such things.

B IV detested old people; B I was devoted to them.

Tender feeling; the parental instinct; love. It is difficult to decide to what extent these were present or eradicated, if such was the case, from the Realist. She had such a strong aversion to feeling these and, indeed, any emotion, that she concealed them if she had them. At any rate she manifested no traits that can be ascribed to them but did some that suggested their absence. Thus B IV regarded children as a great nuisance while B I was very fond of them. Likewise while the latter did not hesitate to exhibit her fondness for certain friends, I did not note that B IV ever did, and further she was decidedly averse to forming friendships. She kept every one at a distance.

Suggestibility. B IV was equally suggestible with B I as would be expected with dissociated personalities. This fact when contrasted with the difference in the respective sympathetic reactions of the two, is strong evidence in favor of distinguishing between sympathy and suggestibility as psychological mechanisms.

Emotionalism. Notwithstanding the failure of B IV to react sympathetically to emotion, she was far from free from them. They were intensely induced by other objects and through other channels. "Music, religion, scenery, a poem, a story, or the personality of an individual aroused intense feelings, pleasant or unpleasant, which swayed B I irresistibly and threatened to dominate IV. Even in recalling to memory a scene of the past each lived over again all the feelings experienced at the time. Of the two probably the feelings of IV were the more intense. But there was a great difference in the behavior of I and IV to these emotions. B I's life was given up to their influence. In the play of her mobile features every feeling could easily be read. But IV fought against them, trampled upon them, resisted them with all her might and main. She was determined that she would not be under the influence of her emotions, whether of religion or music, or of those coming from the personal influence of another. She indeed concealed this side of her character successfully for a long time, pretending that she was indifferent to all that really affected her intensely."¹ The explanation of this behavior is that remembering, as B IV did, her early emotional character

and life as an idealist, she being a realist, was determined she would no longer be that kind of a character and fought against her emotions or avoided everything that gave rise to them. And here an apparent paradox is presented, but it is only an apparent one. B IV had an aversion, as already stated, to religious services including the music and yet she was emotionally stirred by them. This is easily accounted for on a well known psychological principle. The emotions emerged from the religious complexes of B I, which, though dissociated and dormant, were technically, of course, subconscious. Vibrant with emotion they sent their thrills of feeling through her whole being. (Numerous and varied examples of this principle were observed in this case. It is the same as that governing some types of phobias in which the emotion derives from the conserved dispositions of long forgotten experiences). The principle of habit also played a part.

Acquired dispositions. Here we have to do with *intelligence*. Of the major sentiments, that of the conception of self was the dominating one in determining behavior and practically the most important. Of this sufficient has been said. But the negative aspect is equally important; that is to say, the elimination from the character complex of the great dominating sentiments of the Saint—the divinity one, and the saintly conception of self—with which the Realist's conceptions of the realities of life and her sentiment of self were in conflict. These conceptions and sentiments of the one and the other were irreconcilable and necessarily led to an irrepressible conflict. On the minor sentiments, relating to the unessentials of everyday life, there is no need to dwell, as we are only concerned with the forces that took part in the disruption of personality.

The general intelligence of the Realist needs only a word. It was on the same level with that of the Saint, but being freed from the emotions and unpractical sentiments of the latter, particularly the saintly conception of self, on the one hand, and being in contact with the world of realities, on the other, her judgments were better balanced. The self-regarding sentiment with its masterful instinct of self-assertion reinforced by anger enabled her to cope with the realities of life. And yet, being a dissociated personality, her judgments were unbalanced when a problem involved self. Thus she could not appreciate the necessity of reconstructing the complete normal personality and the impossibility of her own dissociated self continuing as a persisting personality.

The general intelligence and culture, however, were of a high

order, although, as has already been pointed out, certain acquired dispositions—knowledge of French, Latin, shorthand, etc.,—were at times switched off.

Such were the main character traits of the Realist. The difference in the reactions of the two personalities to one and the same stimulus should be pointed out before leaving this aspect of the problem. This difference was due, of course, to the differing innate and acquired dispositions retained and lost by each. Thus, for example, when feeling anxious and worried about some circumstance the Saint would react with depression, a feeling of helplessness, submission to fate, patience and recourse for relief to prayer and church; the Realist with violent anger, defiance and rebellion against the world, self-assertion with rejection of all previous good resolutions to accept rules of conduct, and, as an outward act of behavior, perhaps, the destruction of the product of intellectual work that had involved hours of laborious effort.¹⁹

In this description of the character traits of B IV and in contrasting them with those of B I, I have simply assembled facts of observation. It is an obvious interpretation, if not wholly such a fact, that in the one phase were mobilized into a functioning whole certain of the innate and acquired dispositions which were repressed from the other phase; and that of these acquired dispositions certain important ones (sentiments) were the product of the social environment. And conversely in the other phase (B I) were mobilized certain other of the innate and acquired dispositions; and that of the latter certain sentiments were the product of an intensive, artificial self-cultivation—artificial in the sense of not being the natural growth from contact with the environment, but of a volitional premediated self-education. Of course some dispositions (innate and acquired) were common to both. In other words the elements of personality were mobilized into two differentiated integrated systems forming two different resulting and contrasting characters.

That these two mobilizations should come into *conflict* was inevitable in view of the irreconcilable instinctive impulses of their instincts, sentiments and ideals. As this antagonism has an intimate bearing on the theory of the dissociation of the normal self into these two phases, it needs to be more concretely introduced into the evidence.

The respective mental attitude of the Realist and the Saint towards each other, and of the former towards her character as a young girl are to the point. Thus the B IV phase, in the course of the reconstruction of the complete normal self, raised intense objections to being infected with the points of view, the ideals and the emotions which dominated the personality of B I; she equally objected to being the kind of person she used to be as a girl, before her emancipation after her mother's death, for these same traits were then dominant, as we have seen, although not in so exaggerated a form. It was this intense resistance, manifested by angry rebellion and shrinking, that was at the bottom of the obstacle which I so long encountered in amalgamating the several personalities into one whole. It was a force which was well nigh insuperable. "Don't make me B I, Dr. Prince, it is giving me all that I most dread," she wrote, (p. 412). She was afraid of being "infected," as I have already explained in my first publication, "with B I's saintliness," and all that it carried with itself. It maddened her to think she was that kind of a person. So strong was the antagonism that she systematically gave suggestions to herself that were intended to counteract when hypnotized any suggestions that I might give to bring into consciousness the complexes of B I and fuse the personality (pp. 446-450, 492). In hypnosis, as B IVa, all the concentrated essence of this antagonism broke out and for hours resisted every suggestion with constantly repeated counter auto-suggestions. It prevented fusion in that it induced the replacement of the hypnotic state by the waking phase of B IV, or inhibited my suggestions. When at times I was in a measure successful in overcoming this antagonism and fusing the personalities, the B IV phase, then recovering memories of the sentiments and ideals of her other side, became maddened at the thought of becoming transformed into such a character. "Not like B I, not like B I! Never!" she exclaimed (p. 490).

On the other hand, the other phase, B I, was equally antagonistic to the B IV side. When this phase learned what sort of ideas ruled her in the B IV phase she was inexpressibly ashamed, humiliated, frightened, and begged forgiveness. She repented in sack-cloth and ashes. These ideas shocked her saintly conceptions and were intolerable (pp. 407-409, 415). Submissive though she was, the one thing she could not accept was to be like B IV or Sally.

These observations would seem to permit of only one interpretation, namely that the traits that characterized the B IV phase rep-

resented those elements of the original personality which were incompatible with the cultivated saintly and divinity sentiments and their settings and had been repressed and dissociated. These elements included certain innate dispositions, such as anger and self-assertion; and certain acquired dispositions such as the conception of self in relation to the realities of society and a clear and realistic understanding of the outer world. In a sense the phase as a whole comprised a side to the original character. This latter point of view would not imply that on the one side Miss Beauchamp was bad tempered and self-assertive and dominating, but only that anger and self-assertion are two instincts inborn and inherent in every personality and *potentially* capable of being aroused and also of being repressed. In this case they were temporarily excluded by repression from the original personality as active instincts. The acquired dispositions likewise were a side of the original character in that they were acquired by experiences involving contact with the social world of realities during that happy period following her mother's death, after her elopement, when she was following the congenial occupation of a nurse. But when following the catastrophe of 1893 the personality reverted to a greater or less degree to that "dreamy and visionary" period of girlhood, when she saw things "rather through her own thought than clearly and truly," and it made "no difference that the facts were all against her," this acquired realistic conception of the world became incompatible with the idealistic sentiments of B I and was necessarily repressed. Otherwise there could have been no reversion to and resurrection of those ideals.

That the Saint and the Realist were thus varying composites of the elements of personality derives considerable support from another set of phenomena.

B I and B IV could be, technically speaking, hypnotized, really synthesized into a single personality known as B II. It developed that B II was the whole original personality called the "Real Self" but in a state of hypnosis. This self had complete memory or knowledge of herself as the Saint and the Realist—of herself, I say, for so she considered the relationship and so it was. Asked who she was the reply came,

"I am myself."

"Where is B I?"

"I am B I."

“Where is B IV?”

“I am B IV. We are all the same person, only *now I am myself*.”²⁰

Now the points I want to bring out are: first, that this self was a well balanced and synthesized normal self, with the memories of both B I and B IV. The instinctive disposition of self-assertion was balanced by the opposing disposition of self-abasement, and so the self-regarding sentiment was not overdominated by either; and likewise the anger reaction was balanced by a complete and healthy appreciation of the circumstances of her situation; the sentiments that dominated B I were balanced by an understanding of realities; the memories of B I were balanced by the memories of B IV; the points of view of one were balanced by the points of view of the other; and the emotionability of both were restrained by a rational understanding of ideals and the environment.

That this self was a synthesis of many of the elements of each (memories, instincts, etc.), was an obvious fact; and that it was a complete synthesis was a logical interpretation.

The second point is that this self was clearly conscious, fully realized that sometimes she waked up as B IV, meaning that then she became “rattled” and said and did all sorts of “mad things,” prevaricated and fibbed, etc.; and that sometimes she waked up as B I, when she was morbid, nervous and not herself. But nevertheless they were all herself, though she exhibited different traits at different times corresponding to the phases, and consequently she used the personal pronoun, “I,” in speaking of herself in each phase. In accord with this conception of the phases she explained that, as it seemed to her, after the hospital episode she had simply changed in character and that the result of the change was that character known as B I. As to B IV, it seemed to her that in this phase she became, for some obscure reason, “rattled” and was dominated by the traits observed in herself in this character.

It is difficult to find any other satisfactory interpretation of this observation than that we had first integrated into a normal psychic whole (B II) two previously dissociated psychic systems (B I and B IV) of innate and acquired elements of personality, and then, on the subject’s “waking up” this whole had become disintegrated again and its elements reintegrated into two differing psychic systems or wholes

²⁰Pp. 273 and 520.

(capable of alternating with one another) producing two different characters out of the sum total of one original personality.

2. The Genesis of the Realist

There remains the question, what forces induced on June 7, 1899, the first integration of the dissociated elements found in the B IV system and the emergence of this system into consciousness, i. e., its substitution for the B I system.

It should be remembered that this occurred six years after the original normal personality, Miss Beauchamp, had been transformed by the shock of 1893 to B I the Saint. The Realist, B IV, therefore emerged and displaced, not the normal self, but B I, a self from which many innate and acquired dispositions had been repressed. Furthermore, B I had just passed through and was still under the influence of a tremendous emotional experience. She was still further dissociated at the moment and in a sort of quasi-delirious or so-called "twilight" state, like a "shell-shocked" soldier.

In such disintegrated states we know from experience that sub-conscious ideas and systems of ideas (i. e. organized innate and acquired dispositions) more readily are excited and take on autonomous independent activity and, in so doing, their emotional impulses in turn repress, or otherwise disturb, any conflicting conscious processes functioning at the moment. And amongst these phenomena of conflict are the displacement of the latter and the substitution of the previously dormant and conflicting dispositions which then emerge into consciousness. This phenomenon is observed when such dispositions are "struck" by any stimulus which excites their emotional constituent.

This psychological principle, demonstrated by experimental observation on dissociated states, is a very important one. If space permitted I could cite numerous examples drawn from clinical and experimental observations²¹ and covering a variety of conditions—hypnotic suggestion, psychopathic states, dream complexes, multiple personality, etc. This phenomenon is something more than the mere "blocking" of thought, the inhibition of the processes of associative memory, for a recognition of which we are indebted to Freud. And it is quite different from the "compromise," "conversion," and other alleged phenomena of conflict of the Freudian psychology. It is rather the displacement in mass of a system of innate and acquired disposi-

²¹My original manuscript cited a number of such observations illustrating the various types of this phenomenon.

tions by another system by the force of its antagonistic emotional impulses, and the substitution in consciousness of the latter. A hypnotic consciousness may by such forces be replaced by the waking personal consciousness or by another hypnotic one, and vice versa; one psychopathic state may be replaced by another; the personal consciousness may be replaced by a psychopathic or disintegrated one. In such displacements and substitutions there may be and often is *amnesia* in one state for all the experiences belonging to the displaced state, as when, to take a simple illustration, one hypnotic state is replaced by another or the waking state. In more complex conditions there may be a disintegration of the normal personality of such a kind that one or more emotional instincts and sentiments and other acquired dispositions, even that of the conception of self, may be displaced and suppressed, with the substitution of their antagonists. There thus results a splitting and reintegration of the elements of personality—alteration of character. In all such instances some antagonistic but dormant sentiment is “struck” by the stimulus and awakened, and the awakening brings into being the whole system with which it is integrated. From one point of view such reactions are often, not always, defense reactions,²² but this is not an explanation of the *How*, but only of the *Why*.

By the technique of so-called “tapping” the subconscious, (automatic writing, speech, etc.), in favorable subjects, the precise antagonistic and resisting sentiment that has been struck can be reached and identified. The whole process can then be brought to light and the *Why* disclosed. Thus in such cases we are not limited to *inferring* that the phenomenon is due to the resistance of subconscious conflicting ideas, but, by this tapping of the subconscious, we can actually obtain direct evidence of and identify the specific subconscious ideas and impulses which did the resisting and caused the phenomena.²³

²²Many writers seem to be satisfied that they have reached a complete solution of a phenomenon by calling it a “defense” reaction. This may explain the motive but in no way the mechanism. Pretty nearly everything that involves resistance may, from one point of view, be called a defense against something, but the mechanisms of the behavior in defense may be widely different. From another point of view they are not defenses but the awakening of stronger impulses (desires?) for the gratification of something else. The awakening of subconscious Sally’s impulses to play may be called a defense against the boredom of Miss Beauchamp’s religious sentiments, but it was also the awakening of the urge of joyous emotions for their own gratification.

²³The phenomena of conflicts of the kind I am now dealing with are not always displacement and substitution. I have literally, without exaggeration, in the course of an intensive study of the subconscious covering many years, made countless observations on the influence of the subconscious upon the waking consciousness and upon other subconscious processes. In the pages of the study of Miss Beauchamp already published will be found numerous examples of subconscious conflicts of this kind. The

Finally, I may say the demonstration of this principle of the displacement of one constellated system by another which puts up the resistance was time and again obtained in this case of Miss Beauchamp by the behavior of the very systems we are investigating. Thus when the antagonism between the personalities was most intense and ideas pertaining to the personality of B I, but objected to by the other two personalities, were suggested to the normal state in hypnosis, B II, immediately the latter was displaced and replaced by B IVa (pp. 450 and 503). Likewise similar intolerable suggestions to B IVa resulted in a displacement of this hypnotic state by the waking personality, B IV (p. 494). Expressed in other words, the constellated systems which offered the resistance to the suggested ideas replaced, by conflict, the systems to which the suggestions were given. This is a common experience in giving unacceptable suggestions to hypnotized persons.

In other and numerous instances, when there was resistance on the part of the intelligence in being at the time to the awakening (through suggestion) of constellated complexes (conserved in the unconscious) which belonged to one of the dormant personalities, it was then very difficult to awaken this dormant personality; that is, to

resulting phenomena by which they have been revealed have been *aboulia*, hallucinations, inhibitions, and abolition of consciousness, emotion, mistakes and falsifications of speech, writing, visual perceptions and hearing, amnesia, motor acts, etc.

When the subconscious elements become constellated into a personal self, possessing a self-consciousness, and the faculties of willing, wishing and expressing itself in muscular acts, as is sometimes the case in dissociated personalities (e. g., Miss Beauchamp, C. N., M. R., and B. C. A.), the subconscious factors become more complex and the phenomena of resistance and conflict become multiform and take on a more volitional, purposive, and intellectual character. The principle, however, is the same. There is a conflict between the personal consciousness and a subconscious complex. The fact that the subconscious complex belongs to a highly constellated subconscious system, capable of independent thinking, willing, and action, and of intending the consequences of a conflict with the principal consciousness, gives a more purposive and often more elaborate character to the resulting phenomena. For this reason they often have a dramatic aspect which withdraws attention from the psychological mechanism underlying them. In principle these phenomena produced by a constellated subconscious self, do not differ from those produced by simpler subconscious complexes in less complicated pathological conditions and everyday life. Cases of multiple personality are often, therefore, peculiarly fitted for experimental investigation of the influence of subconscious complexes upon the personal consciousness, as we are able in these cases by technical procedures to discover and identify the precise subconscious processes (motives, volitions, etc.) which have determined the disturbances of the personal self. I will recall here, as a few instances, the following observations in the case of Miss Beauchamp:

First, the occasions when in consequence of a suggestion to the hypnotized personality meeting resistance from the subconscious self there resulted an inhibition or blocking of thought (pp. 275, 306, 457).

Second, the occasions when a similar resistance resulted in false hearing, e. g., the words "badly" and "B I" being heard as "beautifully" and "B IV" respectively (pp. 321, 416, 497); or in word deafness (pp. 457).

Third, the occasions when the hypnotized personality became dumb under similar conditions (pp. 275, 537).

change one personality to another. This in principle is the same as the common resistance to hypnotism.

After this digression let us return to the birth of B IV, The Realist. We left B I in a "rattled" dissociated, semi-delusional state while I was interviewing her. She was still, as I have said, under the influence of a tremendous emotional experience. Now, as I interpret the succeeding phenomena, the memories of that experience acted as a stimulus and "struck" the complex of "realistic" dispositions (acquired by contact with the social world of realities)²⁴ and instincts which had been integrated in the normal personality in 1893, but being incompatible with the resurrected religious sentiments and innate dispositions of the altered personality (B I) had been suppressed and had lain dormant. They, nevertheless, were linked in associative experience and were struck as associative unconscious memories. These dispositions now excited came to life, and by the force of their emotions repressed in turn the complexes of the B I personality with which they were incompatible and in conflict. It was a veritable de-

Fourth, the occasions when the subconscious personality spoke automatically (pp. 157, 275, 459, 501) in opposition to a suggested idea are examples of the same kind of resistance and reaction to a suggested idea, although the expression of the reaction in the form of volitional speech involves more complicated processes.

Fifth, falsifications of writing were frequently observed in Miss Beauchamp's letters, produced by purposive interference by the subconscious self. One of the more elaborate of these was a letter in which the letters of every word were misplaced (p. 205). The fact that this letter is a product of intelligent subconscious thought does not in any way controvert the principle.

Sixth, negative and positive hallucinations and auditory hallucinations were very common (pp. 190, 440, 483, 484, 486, 507, 210, 538, 539, 561). One of the most elaborate of these was an hallucinatory letter which the subject read on a blank sheet of paper (index and pp. 283-5).

Seventh, aboulia (pp. 120, 469), falsification of vision (pp. 432-3) and purposive motor acts (p. 157).

Eighth, displacement and substitution were common phenomena.

Many of these, and other phenomena, could be shown to be due to the volitional action of an integrated subconscious self upon the personal consciousness. The former was constantly in conflict with the latter and expressed this conflict in such purposive phenomena. On the other hand some of the most marked examples of these conflicts were seen in the resistance to suggestions which were met with, not from a subconscious self (Sally), but from ideas which had belonged to the consciousness of the personality B IV, and conserved as dispositions in the unconscious. These resistances offered some of the greatest obstacles to the reconstruction of the dissociated personality and the cure of the case. Thus, even when B IV desired to be hypnotized for therapeutic purposes, the previous auto-suggestion which she had given herself, to the effect that no suggestions should affect her, came at once into conflict with my therapeutic suggestions and counteracted them. Owing to this antagonism at these times it was almost impossible to hypnotize her, i. e., to change the mental synthesis, and every suggestion was counteracted and inhibited (pp. 447, 450).

Although I have cited examples from only one case they are not unique for I have observed a large number of identical phenomena in other cases, notably B. C. A., C. N., and M. R. It is not necessary at this time to pursue such observations further. It is obvious, I think, that the principle has been sufficiently well established.

²⁴See p. 128, above.

fense reaction against the emotions awakened by the memories and vision of the original "shock" (1893), and which now, once more, swayed B I with overwhelming and painful force. Thus the complexes of B I, the Saint, were displaced and those characterizing the phase B IV, the Realist, were substituted.

This displacement and substitution was made easy because of the dissociated condition in which B I was at the time, and for this reason I have emphasized the latter in some detail.

Is it mere assumption to postulate a conflict between the dissociated "realistic" dispositions (conceptions) and the sentiments of B I? This doubt is disposed of by the continual, actual and observed conflicts between these sentiments, conceptions, etc. These have already been described. (See p. 127 above).

Furthermore, corroboration is found in the following observation which was, in principle, a repetition of the episode which first resurrected the B IV complexes. As a reaction to a proposition of mine which recalled the hospital episode, B I fell into a state of reverie, so deep that she did not seem to hear my voice. Her mind had become occupied with memories of that experience and of the sentiments, etc., held by herself as B IV. Suddenly the BI phase was displaced and B IV phase took its place.²⁵ This was not an isolated occurrence. In the innumerable alterations of phases that took place it was possible to detect in many of them that the change was effected by the stimulation of a conflicting complex. The same was true of many of the alterations with "Sally." Of course it was not possible to follow the psychological factors in all the constant shiftings of personalities.

This interpretation or theory of dissociated personalities—for after all every intepretation is a theory²⁶—is opposed to present day attempts of a monistic psychology to refer the phenomena of the psychoses to a single subconscious motive, a wish, whether sexual or one to "escape from reality" (so called defense reaction) or some other, and which would only use organized complexes of innate and acquired dispositions to effect a philosophic purpose. Such unconscious wishes, if existent, may have been determinants in the structural development of such complexes, but these complexes, once

²⁵P. 239

²⁶Any one who attempts to postulate an interpretation as a demonstrated fact shows that he has a mind incapable of distinguishing between theory and fact and one that disqualifies him both as an observer and interpreter. Unfortunately we have too many examples of this kind of investigator of psychological problems.

formed, act as dynamic psychic wholes, *en masse*, according to their aims and the ends they seek. In this respect they are mass reactions. Of course in them there may be and usually are paramount forces of instinctive and acquired dispositions corresponding to wishes, fears, ideals, etc. Every sentiment is organized in a larger setting of dispositions (experiences) possessing a variety of dynamic tendencies which will take part in determining the direction which the impulsive drive of the sentiment will take; or the direction may be a resultant of all the forces. Perhaps a good analogy is one of the late alliances between nations. The most powerful (Germany) may be the dominating power, but the wills of the others (Austria, Bulgaria, etc.), will modify and perhaps even overrule the former; or the final action of the alliance may be a compromise, i. e., resultant of all the wills. In the alliance of the psychological dispositions, the conception of a primitive unconscious sexual or other desire, sitting apart and underneath, as an "anima" or an "animus" (as Tristram Shandy's father would have said) "taking up her residence, and sitting dabbling, like a tadpole, all day long, both summer and winter," in an unconscious puddle, or like Descartes' soul in the pineal gland, pulling the wires and directing the dynamic forces of organized systems constituting personality, both "shocks the imagination" and is, to my mind, untenable. The present day tendency to find a quasi-philosophic single principle to explain the complex psychological phenomena of personality, a sort of psychological monism, is not only fallacious but is bound to remove psychology from the field of science. Psychology deals with concrete phenomena which are the resultants of a complexity of forces driving in different directions. The law of the final drive is more comparable to the physical law of the "resultant of forces."

EPILOGUE

I have frequently been asked what was the final outcome of this case. Did Miss Beauchamp remain well, a complete, united, normal personality? I am happy to be able to answer that question in the affirmative. In my account of the case I cautiously left the question in doubt, not knowing whether her reintegration would prove stable and withstand the stress and strain of life. But it proved durable, and Miss Beauchamp not only has remained well, but, like the traditional princess in the fairy story, soon married and "lived happily ever afterward."

FOUR CASES OF "REGRESSION" IN SOLDIERS

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OF all the remarkable cases of nervous disorder which came under my care during the late war I select for description here four which seem to be properly classifiable as cases of regression. I desire to put these on record, because, among all the wealth of cases presenting an immense variety of combinations of symptoms and conditions, these cases, in which the dominant feature, is regression to early childhood, seem to have been comparatively rare, and the nature of the condition and of the processes involved in its onset remain to my mind obscure and deserving of further discussion.

I use the term "regression" in a purely descriptive sense, without meaning to imply any theory of the process or condition. I have been told that it is improper to use the word in this fashion, because the Freudians have annexed it for their exclusive use. I cannot assent to such surrender of the words of our language; for, if the principle were admitted, we should be deprived of many useful words and the English tongue would be seriously impoverished. We should, for example, have to find new words to take the place of "sex" and "sexual," words which the Freudians, as they so frequently tell us, use in a sense very different from that which centuries of usage has attached to them.

Case I. M. B. An Australian, 22 years of age, a private in the Australian Army Veterinary Corps. The early history of the case as here presented is very imperfect, having been pieced together from information supplied by relatives and friends and from some scraps of information which accompanied him when he was sent to my ward in Feb., 1918. M. B. was one of a large family all of whom, including both parents, seem to have enjoyed robust health. He was brought up to an active open-air life as a jockey and breaker of horses, in a large racing establishment, and seems to have had the reputation of a daring rough-rider. He spent some months at the front and, after a heavy bombardment of the area in which he was stationed, was admitted to hospital on Nov. 22, 1917, with complete loss of speech or "mutism."

In hospital he quickly recovered power of whispering, but aphonia remained complete. He stated that he had been on active service in France since Nov., 1916. He was sent to a neurological hospital in

the London area, which furnished the following notes—"Patient mute—cured in 3 minutes by faradic suggestion on Dec. 8. On Jan. 7 appendectomy for acute appendicitis—good result." In January of 1918 occurred a series of severe air raids over London, and it seems that bombs fell in the neighborhood of the hospital in which M. B. was a patient. The War Office ordered all functional nerve cases to be evacuated from the London area to the provinces, I received some fifty of these cases and was compelled to allow some of them to go temporarily to the ordinary medical wards. Among these was M. B. Before his removal from London he had so far recovered from his operation and his nervous shock that he was permitted to go about London on the omnibuses, seeing the sights in the company of his brother G. B., who reported that, but for his stutter, M. B. seemed perfectly normal at this time and showed no nervousness even in the busy traffic of the London streets.

On the day after admission I saw M. B., but had time only for a casual inspection. I noted that he spoke with a severe stutter and showed some tremor of the limbs. Otherwise he behaved normally. During the second night in this ward he was reported to have become excited and frightened, thinking some one was "after" him, and for some time it was difficult to restrain him from leaping out of bed. On the following day he was transferred to my ward. The transfer is said to have excited him, and he was startled by the noise of some falling object. When I saw him shortly after his arrival in the ward he was in a completely childish condition. He sat in bed alert and lively, like a young child taking a keen interest in new surroundings. He childishly displayed his few bits of property and pointed inquiringly towards various objects. He showed no trace of comprehension of spoken or written language and uttered no sounds other than "Oh sis—sis—sis"; this was frequently repeated and used partly as an emotional expression partly to call our attention to the objects of his curiosity. Given a pencil he made no attempt to write; and he seemed to have little or no understanding of the use of ordinary objects and utensils, most of which he examined with mingled expressions of curiosity and timidity.

All his motor functions seemed to be intact, save that when put on his feet he walked jerkily, with short hurried steps, the feet planted widely apart. As soon as allowed to do so, he slipped down upon the floor and crawled about on his buttocks with the aid of his hand, as some young children prefer to crawl. This peculiarly childish gait and preference for crawling to walking persisted for many weeks.

He could not easily be induced to obey simple commands conveyed by gesture, such as to put out the tongue, seeming to fail to grasp the nature of the command. He displayed no interest in letters and photographs of his relatives and friends which we found in his pockets. He could not or would not feed himself, and was fed with a spoon by the nurse, who, he insisted by gesture, had to taste each spoonful before he would take it, quite in the manner of some "spoilt" infants. He played in a childish manner with various objects, making toys of them, and he quickly adopted and became very devoted to a small doll kept as a mascot by a neighbor in the ward. Physical examination showed no abnormality beyond the scar of the appendectomy operation, and occasional slight tremor of all limbs. The expression of his face consistently conformed to the rest of his behaviour. It seemed at this time as though he had completely lost all the knowledge, understanding and motor facilities that he had acquired since the age of some 12 or 18 months; and that he had reverted to the mode of life, bodily and mental, which is normal to a child of some fifteen months of age.

In the course of a few days it appeared that this summary statement of the conditions was not quite correct. There were a very few facilities and memories which were not entirely in abeyance. When offered a lighted cigarette he smoked it forthwith, and then stuck it, still glowing, behind his ear. Subsequently, he would light cigarettes and then throw the burning match upon the bed or the floor in perfect recklessness. A patient who had command of finger-language engaged him in conversation. M. B. showed some slight comprehension and some slight facility in the use of finger-speech, and by this means a few statements about the persons whose photographs he carried were elicited. But he showed no sustained interest, his statements were fragmentary and random, and after the first few days he ceased to respond at all.

He was shown a picture of a steeple-chase; whereupon he became very excited and animated, straddled across a chair and made as though riding a horse-race, and then by gesture and the help of various small objects gave a vivid description of a steeple-chase upon a miniature course indicated on the floor. Afterwards pictures of horses would always excite him and often would provoke a repetition of this pantomime.

Some weeks later when he had made some progress, but still walked like a young child, he was taken to look on at a swimming bath. He stripped off his clothes, dived in and swam like an expert.

These four indications of retained facilities were, so far as I could ascertain, the only exceptions to the general loss of all mental and bodily facilities acquired after the age of some fifteen months.

During the first few weeks subsequent to his admission to my ward, he showed other childish traits, of which the following seem worthy of notice. He slept soundly at night and during the day would pass quickly, almost suddenly, from animation to deep sleep. He wept like an infant, when a nurse accidentally stepped on one of his pictures of horses, and upon other similar occasions. He was sometimes playfully mischievous. His digestion was easily upset; and if he took other food than milk, broth and slops, he would complain of pain in the belly, suffer from wind, and would curl up in bed. He was very easily frightened. He shrank in fear from dogs, all furs, a negro patient, the stuffed head of a stag, and from all sudden noises and all loud noises the cause of which was not obvious. This timidity was the main obstacle to progress; for on each occasion of being frightened he relapsed to his completely childish condition and had to begin growing up afresh.

He quickly made friends and became a universal pet in the ward. One man patiently taught him to spell out a few words on a typewriter. He was induced to draw with a pencil, and began to copy pictures in the crude style of a child of 5 or 6 years. He acquired great facility in describing small events of his daily life in gesture language. By March 5 he was using a few vocal sounds to aid his gestures and had progressed a little in many other ways. For example, he had ceased to crawl on the floor, though his gait was still that of an infant just learning to walk. He hummed fragments of melodies as he toddled about the ward. On seeing a picture of dogs and sheep, he grew very excited and described by gesture and with loud whistles how he had driven sheep. In his vocal utterances, which by the beginning of April were varied, I seemed to detect vague adumbrations of appropriate phrases occasionally. On April 6 he was frightened by the rumbling noise of beds being moved in the ward above him and promptly relapsed to complete mutism and crawling, with loss of all his gains.

After such relapses his progress was usually more rapid than before, i. e., he quickly regained most of what he had lost in the relapse. In May he began to use certain self-chosen vocal sounds as names for familiar persons and objects. He took a keen interest in childish pictures, showing by gesture recognition of animals and other common objects depicted. He busied himself in the kitchen, helping

to wash up and so forth. He learnt some basket making and embroidery and worked keenly at these occupations. One day he wrote "Mick" (his own nickname) spontaneously. About this time he showed new evidence of being on the way to grow up, by trying slyly to kiss some of the nurses.

During this period I made several attempts to change his condition by inducing hypnosis and by narcotisation with ether. The hypnotic procedures succeeded only in inducing repose and a somnolent condition, without further change; and etherisation was no more successful, though he took the ether well and had a tooth removed while under its influence. In this case, as in a less degree in the other cases described in this article, the main difficulty in applying any psychotherapeutic procedure was the difficulty of getting into any effective contact with the mind of the patient, owing to his failure to understand written or spoken language.

On April 6 the brother with whom M. B. had gone about London in January paid him a visit. M. B. showed no clear signs of recognition, but behaved just as I have seen young children behave on the return after a long absence of some familiar friend, namely, he showed a slight shyness, seemingly a pretense of complete indifference, and after a few minutes began to show his toys to his brother as he would to any friendly stranger.

June 13th. After making considerable progress, working keenly at basket-weaving and embroidery, using a few self-chosen sounds as names of things and persons, and going about freely with childish gait, he relapsed with evidences of pain in right iliac region of abdomen, seemingly quite unable to walk. A few days later his head began to jerk laterally without any apparent exciting cause, owing to spasmodic twitching of both sterno-mastoid nucleus. The twitch persisted all day, ceasing in sleep, but recurring on wakening. He made great efforts to hold his head still with his hands. A faradic current; applied to the muscles affected; steadied them and, though he was a little frightened at first, as soon as he realized the steadying effect of the current, he allowed me to push up the strength to a point which must have been painful but which subdued the twitch.

July 2. After making good progress, again relapsed with attack of influenza, on recovery from which he was again quite mute. He has learnt to copy printed words and numbers, but doesn't attach any meaning to them. He still could not use words in counting, but would count a small number of articles by placing them in pairs. He seemed

at this time to understand in a very vague way much that was said to him or in his presence.

Shortly after this time, when it was becoming possible to reach his mind in a very imperfect way by the aid of language, he was removed from my care by the Australian authorities, who ordered that he should be returned to Australia. He seems to have continued to progress slowly towards recovery of his adult powers. In January, 1919, about a year after the outset of the regression, he wrote saying that he remembered his various friends in England, but had not known his relatives on arriving in Australia. Still later news seems to show that he has gradually returned to an approximately normal condition.

Case 2. B. C. On Dec. 31, 1917, a soldier was brought to my ward by the police, who had found him wandering in a neighboring small town unable to give any account of himself. He was dressed in regulation khaki uniform, but had no badge, name, number or mark on his clothing, and nothing in his pockets or elsewhere that would enable us to identify him.

He was a tall, strongly built, handsome youth, about 20 years of age, showing no obvious physical disability or peculiarity. His expression was placid and childlike. His manners gentle and peculiarly engaging, like those of a young child. He gave no reply to questions, and seemed to have no understanding of written or spoken language. But if a command, such as sit down or stand up, was expressed by gesture, he would obey. When any question was put to him in speech, he usually repeated the last word, with a slightly puzzled expression, and gave no further response. When questions or commands were put before him in writing, he would take a pencil and copy the written words slowly and carefully and with quite remarkable accuracy.

Put to bed, he sat quietly gazing up obliquely, as though seeing some image on the ceiling, his head swaying gently from side to side, and the right hand outstretched towards the point of fixation on the ceiling, the fingers gently moving as though beckoning someone. When questioned about himself, his name, his home, his parents, he was apt to fall again into this attitude and would slowly utter the words "I want to go home," or "I wish I could remember." Sometimes these phrases were spontaneously uttered, and sometimes as he uttered them his expression became one of childish distress and big tears would roll down his face. He gave attention readily (unlike M. B.) to any remarks or any object put before him. Questions about his home seemed to be vaguely understood, for they evoked sometimes the emo-

tional reaction described above; common objects put before him he would examine curiously. He failed to name any such object and, if its name was uttered, he would slowly repeat the word. He had some understanding of the use of common objects, but was defective in this respect. He used a spoon and fork normally, as also a pencil, but, when given a box of matches, he attempted to strike one by rubbing the wrong end on the box, and, after persisting in this attempt for about thirty seconds, gave up the attempt. Having been shown how to strike the match, he succeeded at once in doing so, and then held the burning match between finger and thumb, watching the flame curiously until it came in contact with his fingers, when he continued to hold it without any sign of pain until after some three seconds the flame went out. He would withdraw his foot when the sole was pricked, and kick it to and fro with some violence. He gave no reaction to tickling of the sole. Pain reactions as measured by the pressure algometer were abnormally blunt. Careful physical examination revealed, as the only abnormality, a complete absence of deep reflexes in all the limbs, and a sluggishness of the abdominal reflex on the right side, and a trace of paresis of the face and limbs of the right side. On standing he would sometimes sway as though about to fall backwards.

He slept and ate well, except that on January 9 he complained of pain in the occiput and was very restless during part of the night. He quickly adapted himself to the life of the ward, showing himself always friendly and docile. He made rapid progress in the understanding and use both of language and of common objects. After the first few days, he spent much of his time with pencil and paper, copying with remarkable accuracy any pictures put before him, and would sit absorbed in this task for long periods; and sometimes he would make rather skilful drawings of objects in the ward. After a few days he was brighter and more responsive and would smile or laugh with engaging simplicity. The deep reflexes returned gradually and became normal, and the trace of right hemi-paresis disappeared in the course of some weeks. But before this clearing up was complete, it became possible, as his mental inertia diminished, to discover a slight blunting of all sensory appreciation, over the right lower limb. He continued to progress in understanding and use of language. On January 19th he read aloud one of *Æsop's* fables, repeating each phrase after me; but he seemed to fail to take the meaning of the sentences. He named spontaneously and correctly some of the animals depicted in the illustrations to the book of fables, but many of them he named wrongly,

and for some weeks persisted in naming many of them as "rabbit."

On January 19 he was etherised, but though he became mildly excited, there was no further result. Attempts, about this time, to induce hypnosis merely threw him into a sleep in which he was inaccessible to verbal suggestions.

On January 22 he went for a walk on the streets and displayed keen interest in automobiles. He was not disconcerted in the least by the noise of "back-firing" of motor-engines (a frequent cause of trouble to many "shell-shock," patients) and indeed (in striking contrast with M. B.) never displayed any trace of timidity during his stay in hospital.

On January 25 he took up the book of fables, named many of the animals correctly, and read one of the fables aloud with some help with the longer words. But he still seemed to fail to take in the meaning. Given ten common objects and told to name them, he named five correctly, four he failed to name, merely shaking his head, and one, a pen, he named incorrectly as "pencil."

On February 23 he had continued slowly to progress. He had learned to use the typewriter, and typed some simple childish notes to his various friends in the ward. He uttered spontaneously brief childish phrases, and seemed to understand simple spoken sentences.

On March 5 my notes say "He now talks spontaneously a little, but it is difficult to get any other than monosyllabic replies to questions. Still spends much of his time drawing, mostly copying of prints, but also some pencil portraits from life. Given a tape-measure, he examines it curiously. Told to measure a book, he does not seem to understand what to do, but when shown how to do it, he becomes interested and proceeds to measure various objects. He names most of the parts of an automobile engine and shows keen interest in it. Shown a large map of England, he points to Essex and refuses to take any interest in other parts of it. Shown a large map of Essex, he points to the name of a small town K—— and returns to this after every diversion of his attention. He then draws in outline a church spire and indicates by gesture that this is vague or "foggy" in his mind. He shows that his recent memory for places and persons is fairly good. Makes some comic sketches. Does very simple sums on paper correctly, but fails with double figures. Counts matches correctly up to twelve and then fails. Reads a fable aloud, boggling at longer words, but fails completely to relate it, and still fails after repeated reading. Names correctly a picture of a cow's head, and

names on request its nose, mouth, and ears, but fails to name the horns.

In face of this, as of the other cases here described, the question of course had to be faced—was the patient merely malingering, and simulating all his disabilities? Some of my medical colleagues confidently held this view and urged the appropriate treatment; but I was equally convinced of its falsity. The physical symptoms noted above seemed to me to indicate surely some profound but obscure functional disorder of the nervous system, and the general bearing and absolute consistency of the patient's behavior were strongly against "malingering."

On March 11 B. C.'s condition showed no marked change; except that on this and the previous day he had spent several hours sitting quietly, seemingly trying to remember. During these times, if I spoke to him, he would reply merely "foggy" with an expression of mild distress, and tears in his eyes. During the night of the 11th he seems to have had a nightmare or bad dream and fell violently out of bed. About 7 A. M. on the morning of March 12 he woke up and asked where he was. He seemed much puzzled and expressed a fear that he was going mad. He seemed to fail to recognize any of his friends in the ward. When I arrived he showed no recognition. His whole aspect and bearing were subtly changed. The gentle childlike expression and bearing, which had given him a peculiar charm that was felt by every discerning person who had come in contact with him, all this was gone. Instead he stood there respectfully at attention, a strong young soldier before his officer, alert and deferential, but puzzled. Involuntarily Wordsworth's famous lines came to my mind,

"The youth still is nature's priest
And by the vision splendid is on his way attended.
At length the man perceives it die away
And fade into the light of common day."

The boy, with all the charm and mystery of childhood, had suddenly become a mere man.

He told me that he remembered being in London *yesterday* and vaguely something about an air raid. He said he had fourteen one pound notes, six ten shilling notes, and fifty shillings in silver in his pocket. He seemed normal in every way except that he could give no account of his life between December 19 and March 12. I obtained the following account. He was a "fitter" in a motor works and lived

at K—— in Essex; had always been healthy; joined the A. S. C. as driver-mechanic in September, 1914. Went to front in France in July, 1915. In September, 1917, was transferred to the infantry and after short training returned to the front. In December, 1916, a big shell exploded near him. He was put to bed "speechless drunk," but quickly recovered and carried on at the front. On May 20, 1917, he was on guard duty at 5 A. M. when bombs were dropped from the air, killing and wounding many soldiers near him. He was "all of a shake and a tremble," went over to a lorry and then found himself at night-fall four miles from the camp, unable to remember any incident of the day after the fall of the bombs. He went sick next day with vomiting, headache and diarrhoea. He stayed in hospital a few days and then carried on, feeling all right until July, 1917. Then one day he had to drive a lorry through two barrages; and was told that after this he drove his lorry back "furiously like a madman." After this he would at times suffer pain in the occiput. On November 30, 1917, he "came over bad" while under heavy bombardment; he saw a shell "put out" four men and three horses. This made him feel so "bad" that he told a chum to take hold of his arm, because he felt he was going mad. Since May he had not trusted himself to go about alone for fear his head should go "bad." He carried on till December 4, 1917, when he was given fourteen days home-leave. On his way home he "got into" two air raids at Calais, which made him "a bit shaky." After he began to suffer from shakiness under bombardment, he made great efforts to control himself, and would even go and stand outside the dugout to prove that he was not afraid; but these efforts had not been altogether successful. He enjoyed twelve quiet days at home feeling "pretty fit"—but was not quite free from occipital headache. He could not, without further help, remember any events after these twelve days at home. I therefore induced a hypnoid or light degree of hypnosis (*pace* Dr. Boris Sidis I cannot recognize a distinction between these states) and then obtained the following account. On December 18 he went up to London to collect some "kit." While passing down Chancery Lane a bomb fell near him. He felt "a queer dull sensation creeping up into the back of his head." He took the train home, feeling fairly comfortable. The following morning he left home to return to France. He took train to Victoria Station, where he got out to fetch his "kit," which he had left in the cloak room there. He remembered going up the steps from the underground to the main station; but from that point he could remember nothing, until the moment

of waking on March 12. No effort of mine succeeded in evoking any further memory of this period. Unfortunately I was myself ordered to leave for France on this same day, March 12. B. P. remained in hospital for some weeks, continuing to appear perfectly well and normal. He ceased to take any interest in drawing, though at request he would copy with his pencil with approximately the same skill as during the childish period. He asserted that when a young boy at school he had been very fond of drawing, but had lost interest in it. After some weeks he was returned to base duties in England as a mechanic, and after some months returned to base duties in France, where he carried on successfully without further trouble. It only remains to add that B. C.'s parents confirmed his story, so far as they had knowledge of it and stated that he had always been robust.

Case III. B. B. A young soldier about 20 years of age was transferred to my care from a general military hospital on October 25, 1915, with a note to the effect that he had been admitted on October 3 as a case of gas poisoning, had improved, and on October 16 had turned queer and childish, and ceased to speak. He was sent to D. block, Netley (the section at that time for all cases of mental disorder occurring in the British Army) and was transferred thence at my request to my wards.

On admission he is a slim pale youth, of the type of a smart city-bred lad of the working class. He seemed very deaf and was mute. At each question put to him, he looks up at me resentfully, but makes no reply. When shown his name in writing he points to it and then writes the name of the hospital from which he has been transferred. He writes also "British Gas," and taps out some words rapidly in the Morse code. He sits smoking a cigarette clumsily, which he suddenly throws down, half smoked. As he sits in an armchair his right leg displays a coarse tremor, which presently ceases. He holds his hands before him and keeps working them in aimless fashion, spreading them out and looking at them. Occasionally his arms make sudden choreic movements. His head also jerks backwards at intervals. At times all jerks and tremors cease. He writes in a slow cramped fashion, and, when asked when he went to France, writes the name of the hospital from which he was transferred; and can't be induced to write any other words. He draws a horse's head several times and smiles. Told to write his number, he does not obey, but nods when the number is shown him in writing.

On testing the deep reflexes, the limbs make violent jerky move-

ments and continue these for some minutes. The deep reflexes seem to be exaggerated. Power of all limbs seems to be defective, but the patient cannot be induced to make any strong effort. Occasionally passive movements of the limbs are resisted strongly. Pupils large and sluggish. No other physical signs of disorder were observed.

On November 1 I noted—B. B. sleeps and eats well. Sits up in bed lively all day, but for an occasional sudden falling asleep. Plays well on a mouth-organ. His behavior is between that of a young child and that of a monkey. Writes "Charlie Chaplin" and points to another patient mischievously. Examines common objects curiously. Given a pocket lamp, he flashes Morse-code signals. He obeys no orders given by speech alone and does not seem to understand, but obviously is not completely deaf.

During the first weeks in my ward B. B. improved steadily in many respects.

On November 22 his jerks and tremors have quite ceased, and his motor powers seem normal. He is still lively, but less childish. Has read several simple stories with close attention. Still does not understand speech, though not entirely deaf; but answers well in writing to written questions, and thus, and by gesture and the utterance of a very few words, he tells how he was gassed, and gives some facts of his pre-war life. Weeps like a child on slight occasions and is timid.

December 11. Hypnosis induced on several occasions; i. e., patient seems to sleep and limbs assume waxy plasticity; but verbal suggestions have no obvious immediate influence on him. Understanding of speech has improved. Will obey simple verbal orders, if repeated several times in quiet voice. Has begun to speak in whisper. Expressions and behavior less childish.

December 15. Phonates an encouragement. Whistles a tune, getting some notes clear, but of low intensity only. Hearing further improved. Is more serious, less bright and childlike, since beginning to speak; but occasionally flashes into childish soundless laughter. Counts up to 40 and does simple sums correctly, and various other simple tests. Frequently gets himself up as "Charlie Chaplin" and amuses the ward by skilfully playing the part.

He continued to improve in speech and understanding of speech and in general behaviour, but on February 15 he was frightened by a patient who playfully pursued him with a pair of scissors. He immediately relapsed; he became again unable to understand speech; and much more childish and quite mute. In describing the incident in ges-

ture, he wept, rubbed his knuckles in his eyes and in every way behaved like a child of some five or six years.

In this way he continued to progress under stimulation, encouragement and suggestion, and to relapse upon slight occasions of fear; both progress and relapse being irregular and partial. At this time I was not allowed to keep any cases for long periods. If they did not yield rapidly to treatment, I was compelled to transfer them to another hospital. B. B. was therefore transferred from my care without having progressed substantially beyond the stage indicated above. During one of his best periods he won a golf match against other patients.

From B. B.'s father, a labourer, I learnt that he had always been a smart healthy lad before joining the army and that in the army he had been trained as a signaller.

Case IV. P. M. A tall slender man of 23 years, with well developed muscular system was transferred to my care from a base hospital in France on March 2, 1916. The accompanying notes yielded the following information. On February 19 during a heavy bombardment by trench mortars Pte. P. M. became very excited and tried to climb over the parapet in order to capture the mortars and bring them back to the trench. He was restrained with difficulty and sent to first-aid station, where he was unable to give name or number. Thence to the Casualty Clearing Station, which furnished the following note, "Convulsive tremors of all limbs—pupils widely dilated and fixed—muttering delirium." On February 23 he was described as still unconscious, and on February 24 a note reports, "Semi-conscious, unable to answer questions—constant rhythmic tremor of right arm and leg, which continues during sleep."

On admission to my ward he was mute. Physical examination revealed the following signs of functional disorder of the nervous system. Pupils large and very sluggish in reaction to light and accommodation. Tongue slightly tremulous. Voluntary power very defective in all limbs, especially in right arm and hand. Tapping wrist or triceps tendon evokes on both sides violent extensor jerk of the wrist. Tapping biceps causes violent flexion of wrist but no flexion of elbow. In both lower extremities all muscles were a little tense, becoming more so on handling. Both knee-jerks were much exaggerated. There was false ankle clonus on the left side. Stroking the sole evoked the normal flexion response on the left side, and on the right side evoked contraction of the quadriceps extensor of the knee

but no movement at the ankle. Abdominal reflex brisk but irregular on the right, absent on the left. That is to say there was, as in so many of these "shell shock" cases, profound disorder of the reflexes, especially of the deep reflexes.* There was disorder of touch perception on both the limbs of the right side. Sensory acuity seemed blunted, and localisation of touches, though normal or nearly so on the left, was grossly at fault on the limbs of the right side.

Although unable to speak, P. M. was able to reply to my questions by gesture and by writing. The writing was scrawling and indistinct, and achieved only by considerable effort which partially controlled the tremor of the right hand for brief periods. I noted that his intelligence and memory seemed fairly good. His facial expression was apprehensive. He asked in writing whether he would regain his speech and seemed pleased upon being assured of this. I obtained by this laborious intercourse the following brief statement. He was a basket-maker by trade and had always been strong and healthy. Having joined the Special Reserve in 1913, he went to France in August, 1914, with the first British Expeditionary Force, and served at the front until in May, 1915, he received two shrapnel bullets in the left thigh. He returned to duty in October, 1915, though his left thigh was not quite strong, and continued, off and on, at the front until February 18, 1916. On that day his trench was heavily shelled and he could remember nothing that happened between 9 A. M. of that day and a moment about two days later when he "came to himself" in a base hospital. (The meagre notes accompanying him made it probable that this forgotten interval was really about one week in length). He was told that he had been violent and had been forcibly restrained. He felt dazed and had severe pain about the right temple and ear. His right arm and leg were very shaky and he kept dreaming of the guns, and seemed to hear the sound of the guns both sleeping and waking.

On being told to stand up, he seemed giddy, and succeeded in standing and walking a few steps only with considerable support. The effort caused much acceleration of pulse and respiration. He was very timid, shrinking and starting at every noise.

He made little or no progress during the first two weeks in my

*In several cases I have observed reversal of all or almost all the deep reflexes, i. e. extension where normally one obtains flexion and *vice versa*; showing, I take it, disorder of the relations of the synaptic resistances in the cord on which the normal relations of reciprocal inhibition of antagonistic muscle groups seem to depend.

ward, and as conversation was very laborious, I tried direct suggestion in hypnosis. It was difficult at first to induce hypnosis owing to starting at every sound. But with some perseverance I obtained a restful state in which the tremor ceased and his limbs assumed waxy rigidity. In this condition any sudden noise caused recurrence of tremor and a spasmodic jerk of the diaphragm. He was induced to whisper and to walk a few steps with slight support. But repetition of the process had little further effect. I therefore turned to patient questioning and by the aid of gesture, and whispered phrases, I obtained the following statement. Before being wounded in 1915, in fact at the Battle of the Marne in 1914, he came to close quarters with a German soldier who fired his rifle at him, but missed him. P. M. promptly struck him in the abdomen with his bayonet and killed him. He felt rather proud of this achievement and laughed over it with his two chums. Soon afterwards these two chums were killed, and P. M. began to see them come to his bedside at night and would hear them talk. Up to that time he had never believed in ghosts, but did so from that time. He carried on, feeling well (except for his wound in 1915) until shortly before being sent to hospital in February, 1916, when he began to sleep badly, suffered from headache, and was dizzy sometimes. Since being in hospital he has slept very badly because every night he sees the ghost of the German soldier whom he killed on the Marne in 1914. During the night this figure appears suddenly in the ward, points his rifle at P. M. says—"Now I've got you. Now you can't get away," and fires point blank at him. P. M. hears the crack of the rifle, and sees the ghost sink into the ground. He takes this to be a real ghost come to take his revenge; and every night he is terrified anew by this visitor.

I explained the nature of this hallucination as fully as possible to P. M. and confidently expected to find him improving rapidly from this time. But I was disappointed. He declared, truly I think, that after this confession and explanation he ceased to see the "ghost." But he made little progress, and in some respects became worse. The paraesthesia, which at first had been well marked only on the limbs of the right side, became general. His walking improved so that he required only slight support. But his movements showed poor co-ordination, and walking a few steps caused much acceleration of pulse and respiration. As the weeks passed, his appetite and sleep continued poor and irregular, and he showed increasingly early signs of Grave's disease. He lost weight. His eyes became more prominent, his

thyroid enlarged a little, his pulse became more rapid and unduly accelerated by any exertion; and any sudden noise continued to cause a startled jerk and tremor. His limbs became more rigid and resistant to all passive movement. As regards speech, he relapsed from whispering brokenly, to almost complete mutism. The increasing rigidity of his muscles (in spite of all such physical measures as massage, electricity and hot baths) rendered all his movements sluggish and clumsy. In August, in accordance with general instructions issued at that time, he was discharged from the army and retained in hospital as a pensioner. He seemed to understand his new status, but it made no change in his general condition.

In the autumn I was transferred to another hospital, and, since I had failed so miserably to relieve P. M.'s condition, I thought it best to leave him to the care of other hands. It was reported to me that soon after my departure it was proposed to sever some of the tendons in the limbs by way of relieving the increasing rigidity; but that the patient on learning of this intention resisted so vigorously and showed so much terror that the plan was abandoned. He continued to grow more and more childish in general demeanour; gave up all attempt to walk or speak; seemed to have lost his memory of all former life, and showed no distinct recognition of his father who visited him. He played frequently with small dolls and could not be interested in anything but these and similar very childish amusements. The rigidity of his limbs limited severely all his movements. It is not clear from the accounts I have been able to obtain whether the lapse into complete childishness occurred suddenly or resulted from the continuance of the slow regression which he seemed to be undergoing while still under my care. But it seems not improbable that the fear he suffered in connexion with the proposed surgical intervention accelerated or precipitated the final stage of the process. Shortly after my departure from the hospital, P. M. came under the care of Dr. F. A. Hurst who has published a full account of the later phases of this remarkable case.* From this account it appears that in December, 1916, P. M. exhibited an extreme of contracture; the legs were rigidly extended, as also the forearms. There was total anesthesia and analgesia of all external surfaces, and mutism. Electric suggestion restored the power of whispering; and he then spoke a very simple "pidgin" English, consisting largely of words and simple phrases which

*Seale Hayne *Neurological Studies*, Vol. I, No. 2, "Amnesia and Stupor," Case III, London, 1918.

he picked up or was laboriously taught to use. "All attempts to teach ideas of time, space, and colour failed, and he did not recognize any of his relatives." But he remembered very recent events and those acquaintances only whom he had recently seen. "He delighted in childish toys and in a general way his mind was that of a year-old child."

He continued in this condition, making little or no progress, for nearly one year. Then, in November, 1917, on the 22nd of the month, "for no obvious reason he had a headache and became excited in the evening. His memory began to return during the night and he talked incessantly. The next day he realized the deficiencies of his speech and wished to have them corrected. When told a word, he repeated it correctly and remembered it, and he began to form proper sentences."

Shortly after this a laryngeal sound was passed (he had witnessed the recovery of speech by another patient on this treatment) whereupon "he felt something snap in his head and immediately afterwards he talked quite normally, and the memory of his home and his past life flowed back. . . . He soon remembered his experiences in France, but his life in the hospital was a blank, as it seemed to him that he was in France only a few days instead of twenty-one months ago." He had vague recollections of very recent events preceding this recovery; with the exception of this gap in the memory, "his mental condition was now perfectly normal, but for some time very little improvement occurred in the condition of the limbs." Complete anesthesia and analgesia still prevailed, and all the limbs remained very rigid. But there was slow improvement of the bodily condition. By May, 1918, he could stand and move his arms, though with some rigidity. On June 2 he walked for the first time without assistance, and all movements were nearly normal, and he employed himself actively at his former trade of basket-making. The sensibility of the skin (including that of the conjunctiva) slowly returned and "by November, 1918, recovery was complete."

DISCUSSION OF THE CASES

The first question that is suggested by these cases is—Can they be regarded as merely extreme instances of amnesia due to a general functional dissociation of the higher levels of the nervous system? It seems clear that in each of the cases there was such general amnesia, that there was widespread dissociation, and that in consequence large tracts of the cerebral hemispheres were quiescent, their functions suspended. But there are two reasons against accepting this statement

as an exhaustive description of the condition. Cases of very complete amnesia were very common among soldiers during the war. I had many such cases under my care. The common type may be characterized by saying that the patient had forgotten, or could not recollect by any effort of will, any particular facts of his previous experience. A soldier in this condition would be unable to give his name, number or regiment, to say whether or not he was married, where he had lived, or what his occupation had been, or to describe or state any fact of his former life. But he would retain a general understanding of his surroundings, would use common articles normally, and would use and understand language, whether written or spoken, almost normally. Apart from his lack of memory of particular facts, he would behave normally, so that a stranger seeing him going about would notice nothing peculiar. In such cases it was usually an easy matter to restore the memory. If one had clues, a carefully directed conversation sufficed in many cases to effect a sudden or rapid restoration. And if this failed, direct suggestion in hypnosis was almost always successful. In most of such cases there were no complicating bodily disabilities, such as paralysis, anesthesia or contractures.

In the cases described above, the amnesia was more profound. There was loss of understanding of language and of the common things and relations of life; and this, in the more extreme conditions of Cases I and IV, went so far that it might be said in general terms that all the functions or facilities acquired or built up after some date in infancy were suspended. In this respect they were comparable to Dr. Sidis' famous case of Mr. Hanna.* But in another important respect they differed from this case and also from the common cases of complete amnesia referred to above. Namely, they showed, not only deprivation or suspension of functions, but also positive symptoms; for they reverted to childish modes of functioning, both bodily and mental. Their behaviour afforded ample evidence of a re-animation of infantile modes of functioning which had been superseded and apparently lost or suppressed in the course of growing up from infancy. What is this positive process which results in the addition of these infantile modes of functioning to the picture of wide-spread suspension of acquired functions?

One might suspect that the patient is playing an elaborately sustained part, that, without perhaps having explicitly formulated the in-

*Multiple Personality by Drs. B. Sidis and S. P. Goodhart, New York, 1905.

tention of doing so, he is acting the part of a young child with more or less skill. I confess that there were moments when, as I stood before one or other of these baffling cases, I was tempted to take this view, so unhesitatingly expressed by some of my medical colleagues. But the deprivation of functions was too real, and the consistency and even the inconsistencies of the "acting" were incompatible with the view. I was driven back to believe that the dispositions to infantile modes of behaviour which had ceased to function in boyhood, had not been transformed as they were superseded, but merely suspended or rendered latent, and that the loss of the higher functions was accompanied by an actual re-animation of these dispositions that had been latent or in suspended animation for some twenty or more years. This would seem to be the essential feature of the process of regression which distinguishes it from all amnesia or dissociation, no matter how profound.

I seek to render my conception of regression more definite by likening the nervous system to a tree, which it resembles in the facts (1) that the higher the branches and twigs the more recent was their growth. (2) That the sap and vital energy of the tree seems to tend towards the highest most recently formed parts of the organism, at the cost of the lower branches and stem, in which many potential growths and vital activities lie latent so long as the upper more recent structures are functioning normally. If in a tree these most recently formed parts are injured, in any way, as by frost or fire, their vital activities are checked or suspended, we observe a new outburst of growth and vital activity in the older more primitive parts, namely, we see buds growing out from those parts. (I do not know if this is true of all trees, but it may be frequently observed in the willow and the lime tree and, I think, many other kinds). This seems to be truly analogous to the process of regression in the cases described above. The highest or most recently developed parts of the cerebral cortex represent the growing points of the human organism and are analogous to the growing points of the upper branches of the tree. Arrest of their functions is followed by a new outburst of vital activity in the lower older parts, which had been rendered quiescent by the flow of vital or nervous energy to the more recently organized parts. Just as the tree injured at the top puts out new buds below, so the nervous system, when the vital activities of its latest organized parts are arrested, puts out new buds below, i. e. resumes or re-animates its in-

fantile functions. In both cases there is new growth and activity on the lower older plane.

I am informed by a highly competent biologist, my friend Mr. Julian Huxley, that analogous phenomena of a striking kind occur among some of the lower animals; namely, one of these soft bodied creatures, having attained a certain differentiated structure, will, if its more specialised recently formed parts are gravely injured, undergo a process of regression. That is to say, it reassumes an earlier form and mode of growth, becomes infantile again, and proceeds to grow up anew from this infantile form. It looks, then, as though, in these cases of regression in man, we have to do with a process which is not peculiar to man, but is, at least as regards its general type, exemplified in many different parts of the realm of life. For this reason I would regard it as a biological rather than a specifically psychological process, that is to say, as a process which though purposive in a sense, like all biological processes, is not governed by any explicit or conscious purpose. It might perhaps be regarded as the ultimate or extreme consequence of the instinctive shrinking of fear. Fear is the great inhibitor, which determines shrinking, both bodily and mental, from all fear-exciting things and ultimately perhaps from all things. If the fear be sufficiently intense and sustained or renewed, we may imagine this inhibitory or shrinking effect carried so far as to paralyse all the higher functions; and we may suppose that the vital or nervous energy, being withdrawn from those levels of the nervous system concerned in these higher functions, then revitalises older, more primitive, infantile levels of function, finding its outlet through nervous channels organized and active in infancy, but long disused. Fear seems to have played the dominant role in all the four cases described above, and in three of them, an excessive or abnormal timidity persisted, and slight occasions of fear determined in all these three cases immediate relapses after partial recovery.

I can see no sufficient reason to postulate as the root of these regressions any hypothetical incestuous fixation on the mother, or any unconscious desire to return to the womb. Far stronger evidence than has yet been offered of the reality of such fixation would seem to me to be necessary, before we should be justified in seeking an explanation along that line. And even if it were possible to show that a "mother-complex" plays a part in the determination of regression, it would still remain a highly disputable question, whether such a complex contained any sexual component.

I cannot avoid a slight feeling of shame in publishing these cases; for my account reveals the fact that I was able to contribute very little by any form of treatment towards the restoration of the patients to the normal condition. The use of any psycho-therapeutic procedure was in all these cases seriously handicapped by the difficulties of communication. It should be said that in each case the patient spent many hours in my company, during which I explored the mental conditions as fully as seemed possible. In each case I easily gained and retained the confidence of the patient, or as the Freudian would say, "transference to me" was easily effected; that is to say the patient quickly became docile and suggestible, trusted me, confided in me, seemed to have no reserve towards me, and, in Case IV especially, showed a childlike or dog-like devotion to me. Whether stern measures would have aided in a more rapid restoration to the normal I cannot say; but in view of the timidity, the ease of relapse, and the severe trials in the field through which all of the patients had passed, I did not feel justified in attempting any such measures.

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RESOLUTION OF A SKIN PHOBIA WITH NIGHTMARE

A Case of Mental Re-adjustment in Dreams without Conscious Catharsis

BY LYDIARD H. HORTON

EVERYONE who has collected dreams in any large number, from a variety of persons, knows that he will encounter a certain proportion (probably a fraction of 1%) of disturbing dreams or nightmares, even among supposedly normal persons. The result of this experience is of course to make the inquirer comprehend the occurrence of the seemingly abnormal among "normal" persons. In psychological laboratories it would be worth while to collect dreams if only to bring forward this element of the strange and the peculiar in so-called normal psychology, and thus to pave the way for explaining the more distinctly pathological forms of mental action.

The present discussion suggests in what way the interest of the collector of "normal" dreams comes to be expanded so as to include a consideration of mental disturbances.

To be sure, in giving my own experience with one particular case as an example, I am not pretending to represent the typical attitude of the student of dreams. I had for years, preceding the investigation here reported, been interested in questions of the Abnormal and had kept in touch with the XXth Century developments of mind study and "mental therapeutics" in America. I was, therefore, more than usually ready to detect and give attention to any abnormal manifestations that might come my way.

The case of Miss Theresa W—— came to my notice in the first years following the sudden revival of interest in matters of mental therapy, a decade ago. This was a period marked by the translation and publication in this country of Dubois' "Psychic Treatment of Nervous Disorders" and by Freud's visit to America, presently followed by the formation of the Psychoanalytic Association of New York. Agitations upon the question of the meaning of dreams naturally ensued and "Freudian complexes" were already very much discussed at second hand by persons who could not read Freud and his school of dream interpreters in the original; for at that time there were virtually no translations of the Teutonic psychoanalysts.

As an individual worker, I had been occupied for some years previous to this revival of interest in onirotics, with an investigation of sleep and of levitation dreams. Suddenly I found my unpretentious studies swamped by a tidal wave of newly arrived conceptions. This flood immersed the processes of dreaming in a vast sea of conjectures related to archaeology, anthropology and folk lore, and the "symbolism" derived therefrom.

This immense speculative element in the new psychoanalytic theories rather carried me off my feet, and made me lose touch with my original interest in the Flying Dream. It seemed necessary to find solid ground in the study of "dreams as they come" before venturing to advance final judgments. As to the meaning of such baffling states as are associated with dreams of "levitation," I had to hesitate and seek a new orientation.

Accordingly, while I had gathered dreams for many years in a desultory fashion, I decided to make now a more concrete collection, taking examples from various persons at random, in order to get a fair sampling.

MANNER OF COLLECTING DREAMS

In order to obtain varieties of dreams in a more or less spontaneous fashion, I simply let it be known among teachers and fellow students at a certain institution that I was making a collection and would appreciate any instances of dreams, the more trivial the better.

EXHIBIT I A—JAN. 5

Twin Apartment Dream

Troubles with my landlord, culminating in my determination to break my lease. The apartment is on the top floor of a many-gabled roof house.

My dream starts with a very complete picture of my apartment and the other apartment on the floor, which was exactly like mine with this difference: Out of the main room of both apartments there was a small room, with sides sloping to the floor and with great irregularities in the roof outline. My little room con-

nected with nothing else; but the counterpart was the landing at the head of the stairs and opened into both apartments.

The other apartment stood vacant for some time; then, one day, I came home and found it rented to two delightful young college girls. I made their acquaintance, and congratulated myself on my neighbors.

The next day, I came home and found, after toiling up three flights of stairs, to my dismay the landing lined on all sides with rows of garments hanging two or three feet deep; and the girls were cheerfully unpacking and hanging up more.

I also made the matter easier by offering a suitable blank form on which the record could be kept without it being necessary for me to give personal directions.

About twenty-five dreams of average length and degree of simplicity had been presented when one of the contributors, Miss W reported to me a more than usually intriguing and complex dream.

Now, in order to maintain the interest of my subjects in the collecting of their dreams, I had volunteered to do my best toward interpreting or explaining what each dream meant or implied. Miss W's dream was no exception. Accordingly, with the scantiest informa-

I asked them if they intended to keep the clothes there, and they said "Yes." Then I said it would make it impossible for me to have any one call, at least any men. They said they didn't see why. Then I asked if the landlord had given them permission to use the landing for a clothes-closet. They said he had. The conversation was carried on with perfect friendliness.

Then I went to my room, and wrote to my landlord that I should move out, as I considered that he had broken the contract. My wrath was all directed toward my landlord.

EXHIBIT I B

Twin Apartment Dream

ADDITIONAL INFORMATION

The little room opening out of mine had cobwebs hanging from rafters. The floor of this room was on two levels; the lower part having a drop of about four feet.

When I went out to mail the letter I had written to the landlord, I looked up at the house, and it seemed to be arranged on the kitchenette idea. There was much polished woodwork, and a great many doors with brass handles.

EXHIBIT I c

Twin Apartment Dream

ASSOCIATIONS IN ANSWER TO QUERIES

I was planning to turn my kitchen into a dressing-room, as I do very little house-keeping, and have two corner cupboards built in for a kitchenette arrangement in my dining-room. By sleeping on a couch instead of a bed, I should have two living-rooms and no kitchen. I was also planning to have another clothes closet built in in the kitchen.

* * *

I have felt indignant at the landlord ever since I moved in because of his delay in making promised repairs. I had a lease, so could not entertain any idea of moving.

* * *

Regarding the stairs, I think this may have been caused by the steps in LaFayette Park that I climb every afternoon on my way home from school. It is a hard climb and I am very tired these cold days when I reach the top because I can't loaf on the park benches.

* * *

I hardly know who is my neighbor. I have certainly wished many times since coming to this neighborhood, that I had some one who is congenial to be chummy with.

tion about the dream contexts, and without taking any "associations" beyond the most general ones which were spontaneously given by the subject in filling out the blanks, I made a guess at the probable significance. This was not done for oracular purposes but simply in order to test the possibility of a correct "guess" at what may lie behind a given dream. This dream and its interpretation together with the correspondence are given as Exhibit I.

SUMMARY OF EXHIBIT I

The dream itself was a fancy of a reconstructed apartment. The interpretation was a guess at what this might imply. The subject herself perceived that I was not willing to suggest too pointedly (to a comparative stranger) that she might be contemplating something more than *an apartment*, namely, a *house* with the implication that she was to become the mistress of that house.

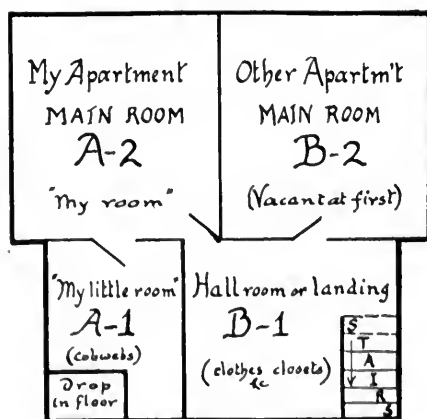
EXHIBIT I d—JAN. 7.

Twin Apartment Dream

TENTATIVE INTERPRETATION

Study of the Oniric Parallelism

The likeness of the two apartments, A and B, as revealed in the first scene, or the fact that while they are (as to floor plan) replicas of each other, they still differ in certain essentials of convenience, indicates that you as a dreamer, were establishing a comparison in regard to those points of difference. First feature—one little room (B-1) is accessible and the other (A-1) is less so; for you have a complete stairway in the room in one case and in the other you have only a rudimentary stairway as indicated by a mere drop in the floor. This is a beginning of construction work in dream fashion and indicates plans to re-arrange the little room (A-1). Second, according to the later scenes, the little room that is more accessible (B-1) appears distinctly to use staircase and doors



whereas in this early scene the other little room (A-1) is in disuse, as indicated by the cobwebs. The large room (A-2) in one apartment (your room) is occupied but the other room which corresponds to it (B-2) is vacant in the other apartment. (This feature of the dream was determined by your desire to rent a room in your actual apartment just as the second feature was determined by your desire to make better use of your unused kitchen).

As soon stood out from the maze of details, the subject was actually considering the acceptance of an offer of marriage. Instantly, there had been drawn into this consideration the whole question of her satisfaction or lack of satisfaction in life as she was then living it in her apartment. Taking a balance of the *pro* and *con* as the dreamer was, she seemed to develop a considerable measure of dissatisfaction as the net residue. This is suggested in the attitude toward the landlord and the desire to break her lease.

Still, the validity of this statement can be impugned in view of the highly involved story that the actual dreams exhibit; and we must hasten to simplify it.

Wishful Element

In the second scene the unrented room is occupied by congenial people. This is an obvious wish fulfillment. You were wishing that you could rent the room in your apartment, as you have indeed since stated. The "two delightful college girls" indicate perhaps a desire for a greater amount of congenial company; also possibly a practical consideration as to renting to two persons instead of merely one.

In the third scene the question of crowded space comes up. There is a crowding of clothes so that the air cannot get at them. This represents a feature you object to as making the dwelling less attractive and accessible to your visitors.

Prospective Aspects

The little room (B-1) serves for comparison with the other unused little room. The contrast indicates that your reconstruction of the cobweb room will be in the direction of making it like the room at the landing. But while we know this in scene first, the exact direction of your thought is not plain. In scene third we may surmise that you envy the greater closet room in the landing while you deprecate the poor way of hanging the

clothes. We look further to see what you think of doing about it.

Your next action is to telephone or write your landlord. You want him to remedy the conditions indicated in scene third. This is an echo of real life. The actual situation in real life had reached an acute stage.

Significance of Stairs and Kitchen Cabinet

So far I have not explained the stairway effects and the irregular outlines. Connected with this fact of construction is the incident in scene three where you toil up three flights of stairs. Now the question arises why this apparent preference for toiling upstairs when in real life you have an elevator to your apartment. No doubt this may be a mere echo or "perseveration" of the fatigue of climbing the slope of LaFayette Park, but it may also (taken with other features) indicate that you would rather do the toiling in a *house* than to do it on coming from your work.

However that may be the last scene lightens up the picture greatly. For there your enlarging idea of building shelves or a kitchen cabinet (as actually planned in real life) has spread over the

While already I had become familiar with the possible meanings or implications of an appeal to one's landlord and the desire to break one's lease, I did not venture to attribute any very specific symbolism to it here. From the standpoint of onirocritics, *resisting the authority of one's landlord, appealing to the police and complaining to the authorities* are analogous. The suggestion of radical action that is contained in them is usually found to be based on a dissatisfaction with Fate or with the larger compulsions of life.

But, in this case, I could not in any way apply such ready-made considerations. It was a dream replete with idiosyncrasy and it seemed *sui generis*. The correspondence that followed the dream brought this feature very clearly to light. Although leaving as problematical so many avenues of meaning, my cautious interpretation proved nevertheless sufficiently exact in certain directions to have made a definite "hit" with the subject.

EXPLORING THE DREAM CONTEXTS

As a result, she was brought to the idea of searching for those wider, more serious implications of the dream that I had refrained from fathoming in the interpretation.

Presently, it turned out that her interest in recording dreams was stimulated by the fact that she had for some time been a sufferer from nightmares, which were particularly distressing and inexplicable.

whole face of the building; till it is all a kitchen cabinet, as it were. This auxesis is common in dreams. But it indicates that your interest runs to a house rather than an apartment and that you are perhaps in your mind revolving conditions under which you would in reality forsake the apartment which you have reconstructed and indeed occupy a house. In the meantime you are satisfying this idea in real life by thinking of your apartment as a house and by reconstructing it to your satisfaction.

Not all points as to the actual imagery of the dream are clear and may require some correction of this interpretation.

EXHIBIT II a—JAN. 17.

Regular Pattern Dream (Breadcrust)

I dreamed that I put my hand to my face and found my skin hard like a crust of bread. Then I looked in the glass, and my face was all covered with a putty-colored, crust; but instead of being smooth, it was all marked off in small perfectly even cone-shaped elevations, only the cone had a rounded instead of a pointed top, like this only absolutely regular. That is the feature of the dream that has the horror for me.



Before I had time to turn the case over to any of my medical friends (psychoanalytic or otherwise), the matter reached such an acute stage that I felt obliged to undertake something of an analysis myself. It seemed like a matter of First Aid.

DATA OF EXHIBIT II

The subject manifested an acute distress in treating what seemed, from her account, to be a horrible sense of fear. Her self control was taxed in relating certain recurrent dreams that had recently become very prominent. (Exhibit II *a* and *b*). I bear vividly in mind the nature of her appeal to me. She phrased as impersonally as possible an evident abhorrence for the memory of the dream. She said she could not stand the horror of it any more.

As a first step in dealing with the matter, I assured the subject that it was possible to remove dreams, as I had done it in some instances, through producing experimental rest states, which seemed to antidote abnormalities of dreaming.* I told her that as a last resort I would pass on the necessary technique to her, namely, that for acquiring aptitude in deliberate relaxation. In the meantime, however, I suggested that she should try to get rid of the dream by "drawing its teeth." I told her that technical study along these lines had shown that many dreams are rooted in some unsatisfied desire or unresolved mental adjustment. My theory was stated that *necessary adjustments can be brought about even without full knowledge of the origin of the dream*.

Nevertheless I counselled her to try to remember, next time the dream came, all that she could about its possible connexion with the past. In order to insure adequate efforts at reminiscence, I impressed this suggestion forcibly upon the patient, sitting as she was in a comfortable chair in the parlor with her eyes closed. This was conversational exhortation rather than "hypnotic" suggestion.

THE ANAMNESIS OF THE SKIN PHOBIA

Judged by first results, the suggestion, as such, did not become particularly effective, from the standpoint of the subject. But as experimenter, I regarded a certain amount of preliminary non-success as a practical necessity. I did not see how results could be accomplished without some incidental pain—the pain of drawing the teeth of the dream.

*I did not realize then that a technique for disposing of annoying dreams formed part of the armamentarium of Descartes as spiritual director. (See Adam & Tannery).

Shortly after, I obtained a full record of the horrible nightmare. This will be found in the notes following upon the so-called Honeycomb Dream. (Exhibit II *b*).

Evidently, the fancied presence of a pattern upon the skin was a feature of the horror and to this extent the dream partook of the nature of a skin phobia. The dreamer's interest in her skin might have predisposed her to the formation of such associations. Considering also the fact that the subject was not a quite young woman, but was at an age where the condition of one's skin makes a marked difference in the appearance of youthfulness or the reverse, it was not unnatural to suppose that the phobia had something to do with the

EXHIBIT II *a*—JAN. 17

Regular Pattern Dream (Breadcrust)

INVENTORY

Scenery, Stage Setting, and Weather:

101. Bedroom, including mirror.

Characters:

201. Myself.

Stage Setting:

301. Face marked off into elevations; perfectly even, cone-shaped.

302. Putty colored crust on face.

Situations, Acts, and Turns:

401. Feeling of face.

402. Going to glass and examining face.

403. (Wakes up suddenly).

Emotional Tone

501. Curiosity.

502. Disgust.

Special Mention:

801. Putty color.

Regular Pattern Dream

ASSOCIATIONS

Has been worried about appearance of face; family has said it was getting wrinkled. . . . She was never vain, but was a pretty child; in tableaux.

Felt crust and irregularity simultaneously with texture.

Proud of skin as a child.

Has been interested lately.

Always on some surface that ought to be smooth.

Always putty-colored.

Had a horror of oysters. Butler told her they were alive.

Eats oysters now, but never bites them.

Always had honey in comb; could not eat it until she was in Switzerland.

Cannot remember when she has been without the feeling.

Mother said she always ate with her eyes. Mother is living.

The dream always wakes her up; shudders all over.

No crisis now, nor any recent crisis.

[*In spite of this, it developed subject was considering an offer of marriage.*]

EXHIBIT II *b*

Regular (Honeycomb) Pattern Dream

HISTORY

It isn't always a part of me that is marked off in that way; and it isn't necessarily a part of any one that is marked off. The pattern is not always cone-shaped, and it is not always a hard crust.

fear of growing old. However obtrusive, this supposition was simply held in reserve and played no guiding part in the exploration that followed.

The experimenter had hardly got oriented as to the actual content of the strange nightmares (Exhibit II *a*, *b*, and *c*) when a second appeal for help was received. (Exhibit II *d*). The situation seemed then sufficiently serious to require another appointment with the subject, if only to strengthen her confidence.

When I saw her that evening (January 19) she was so affected by this repeated recurrence of the dream (Exhibit II *d*) that she remained with her face buried in her hands, refusing absolutely to give any details because of the very horror of mentioning them. When

But very often I dream of some surface that is covered with absolute regularity by some kind of something that projects from the surface, and it is always crowded together. And it fills me with a perfect horror. I am never entirely free from the feeling of repulsion.

The sight of *tripe* affects me in the same way and to the same degree. The honey-comb has the same effect, but to a much less degree.

I can't remember when I haven't had this dream; but it comes more frequently lately, and the sensation of shuddering disgust comes back whenever my mind is not really busy.

What you said to-night about entering upon such work as a Doctor has made me hope that you could and would take me as a patient.

I have used all my will power, and I have a good deal, to rid myself of this fancy and to reason myself out of the sickening disgust at the sight of a surface covered with absolutely uniform and reg-

ularly arranged projections; but I am afraid that my very effort has made the thing get a stronger hold.

Of course I would rather not have any one know about this, for it seems awfully silly.

EXHIBIT II c—JAN. 17

Regular Pattern Dream (Orange)

FIRST RECURRENCE (*Correspondence*)

My dear Mr. H——:—

The dream came again this afternoon (4.30 P. M.). It was very brief:

I was holding a beautiful golden yellow orange in my hand, when it suddenly changed to a putty-colored, coarse skin, covered with the regular cone-shaped elevations crowded together.

I hope you can cure me; I dread having it come again. In fact, I don't believe that I can stand it. Of course I can and shall; only it would be a great relief to think I would never have that sensation again.

Yours cordially,

I pointed out to her, in as persuasive a way as possible, the necessity of making this disclosure of the content of the dream, she finally gave the following account; accompanying her narrative with unfeigned movements of shuddering repulsion:

"The regular pattern this time was all over my chest and it looked like the underside of a star fish. And these regular projections also waved and crawled like the tentacles of a star fish."

Whatever I may have thought about the possible meaning of this mass of crawling crowded projections, I said nothing about it. I made no attempt to explain the matter to her in any scientific, or still less

INVENTORY—FIRST RECURRENCE

Scenery, Stage Setting, and Weather:

101. At home.

Characters:

201. Myself.

Stage Properties:

301. Beautiful golden-yellow orange.

302. Putty-colored, coarse skin, covered with cone-shaped elevations.

Situations, Acts, and Turns:

401. Examining orange.

402. Metamorphosis of orange.

Emotional Tone

501. Horror.

EXHIBIT II d—JAN. 19

Regular Pattern Dream (Starfish)

SECOND RECURRENCE

I have had the horrible dream again. I am afraid your suggestion had lost its force because I was not able to find out the cause. I think I never shall because the details of the dream make me so sick with disgust that any other impression is crowded out.

I feel rather hopeless over the whole affair, but your theory is interesting any way and the other two dreams work out most beautifully.

If you only were not so busy, I should ask you to (what do you call it) give me a treatment, or operate, or prescribe; but I suppose that is out of the question.

EXHIBIT II e—JAN. 21.

Regular (Honeycomb) Pattern Dream

CORRESPONDENCE

My dear Mr. H—:—

Mother wrote me that she and her mother had been poisoned by eating honey, and that she has a vivid recollection of the terrible agony she suffered from it, and also remembers how her mother writhed with the pain. She does not remember whether I liked honey. In fact, she has no recollection of any of her children being affected one way or the other by the sight or taste of honey. She said we always had it because my father liked it, but that she had to be very careful not to get any taste of it. I don't see how this could have

in any psycho-analytic, sense. I simply treated it as one treats any horrible happening, that is to say, by reassurance and encouragement.

It is well to make this clear because of the mention, in Miss W's letter of January, 19th, of my theory. (Exhibit II *d*). This held no reference to any specific origin for her dreams but to dreams in general and to their being largely the result of entanglements of unassimilated memories. This was the "resolution of physiological states" idea, in contrast to the Freudian belief in the need for a conscious Aristotelian catharsis. It was along the line of promoting disentanglement of physiological memories that we proceeded to study the implications of the "pattern" dreams.

ALLEGED PRE-NATAL INFLUENCES

Meantime I had asked the subject to write her mother, inquiring what possible origin such a dream could have in the events of Miss W's childhood. The investigator was somewhat bowled over by the fact that a reply to this inquiry about the Honeycomb Dream resulted in a suggestion of prenatal influences, as will be seen in Exhibit II *e*. Conjectures in this direction, however, yielded only futile clues. The mother's extreme distaste for honey seemed to be merely a coincidence. Certainly it did not explain away the dreams associated with the honeycomb pattern, inasmuch as, on second thought, I realized that the dreamer did not herself have a horror of honey. Thus the pattern—not the substance—became the significant matter for investigation.

Further exploration showed a rather bare field of associations around the "patterns." The phantasies carried no suggestion of any transcendental, anthropological memory, but they did reflect a very

affected me, because my grandmother died before I was born, and my mother found out that she couldn't eat honey before she was married.

She says she is sure that I was never badly frightened when I was a child; and that I was never mentally disturbed in any way; that I was a most ordinary, commonplace child, only much naughtier than any of the rest. You can see prob-

ably that I am not inclined to probe into my past any further.

I would like you to come to my *house* Friday night. I have already begun the changes that probably called forth my dream, and I am so proud of my work that I would like to show it off. Also I expect a friend, Miss G—, to be with me, and she is very much interested in what I have told her about your theory.

Yours cordially,

distinct sentiment of horror associated with particular sensory images, represented in sleep.

DREAM'S RELATION TO WAKING LIFE

The sentiment of horror under these circumstances, was not entirely without parallel to similar disturbances that she had experienced in waking life. But her waking horror of "pasty-colored oysters" (which is cited in her free associations, Exhibit II *a*, and was due to the butler telling her that oysters were alive) had no such importance now or in the past as to justify regarding oysters as the focus for the extreme emotion experienced in the dreams. Here, the inventorial technique secured a just balance in weighing the relative importance of evidential items. (I find that the insignificant, rather than the most significant, items in the inventory often furnish links whereby one can rearrange the dream items in a new and true synthetic picture of the real subconscious situation).

All the obvious clues seemed to prove futile.

Now, let us contemplate the state of the problem after the horrible star-fish dream (Exhibit II *d*). The *regular pattern* was not the only horrible element on Jan. 17 and 19, but *pasty aspects* and the *putty colored, coarse skin*, and, finally, the tripe-like rough surface played a part.

The problem is, of course, to form these scattered impressions anew into a whole, acting on the principle so well stated by Emerson: "The Ego partial makes the dream; the Ego total makes the interpretation."

The scant items so far obtained are, or were, according to my hypothesis at the time, elements of the unadjusted memory. Their scantiness represented the discrepancy that Aristotle has so beautifully defined by the distinction that he makes between Memory and Reminiscence. The reminiscence of this subject was obviously lame, the memory was the *x* in the problem. The reminiscence had blanks in it, and, in fact, many of the elements might be supposed to be actual distortions of the original.

CORRECTING THE DISTORTION OF MEMORY

I might have taken, had I known it at the time, my text from Aristotle:

"The most skillful interpreter of dreams is he who can discover resemblances. For a plain dream can be interpreted by anybody. By resemblances, I mean, as I said before, that the pictures of imagination are very like pictures in water. In the latter, when the movement is violent, the reflection and picture bear no resemblance to reality. And so the clever interpreter is one who can quickly distinguish and see at a glance in a confused and distorted picture the suggestion of the man or horse or whatever the given object may be."

Given the broken and distorted elements—*required*: to find the original that lay back in the past, changed now by *anamorphosis*. To do this, it seemed to me that it was necessary to have more dreams. For I had absolute faith that the actual connections within the nervous system (i. e. within the system of registered *neurograms*, as Morton Prince calls them) would declare themselves. That is, the totality of the memory that I was seeking for (as the original impress) could only be restored by reanimating the seemingly inert links of thought. It is, in the language of telephone operations, a case of "re-establishing the connection." It would appear that what had so much difficulty in becoming clear in the dream and what was testified to with so much effort in waking life must be sought in those unconscious depths where it seemed to be, as it were, sunken. Further dreaming, rather than more analysis or association tests, was to be my line of communication. Thus, it was not for the experimenter to analyze, but for the dreamer to work out the matter by a synthesis of memory elements. Even at this time my conception of what Freud calls the Dream Work was entirely different from his. I believed its dynamic aspect to be an *adjustment of neural conflicts* and that the various dream items were merely echoes of the battling of tendencies; thus eliminating "Censorship" and other alleged mechanisms, except possibly "Dramatization."

In this connection, it is of interest to note that the nightmare features which were the very centre of the psycho neurosis were conspicuously deficient in *dramatization*, so far!

Now, for a time, we have only to consider ordinary types of dreams.

The first one following this incident (Exhibit III) is called "The Draughty Window Dream." It is plain enough that it was dictated by a reaction to the sensation of cold. It had features that

cannot be very well understood, unless we use the same explanation that I have already presented in connexion with dreams of Insufficient Clothing and Flying Dreams (1919). I refer particularly to the concourse of people, i. e., the traffic going on by the bedside of the dreamer. This aspect is reflected in the various items of the dream, numbered 102. *Sidewalk from bed to window*; 202-8. *people*; 503. *the cheeriness and hurry of the passers-by*. (See Exhibit III, Inventory).

EXHIBIT III. UNCONSCIOUS PERCEPTIONS POSSIBLE

The featuring of *traffic* in dreams is very often the result of heart-beats. They are perceived in sleep without actually attaining to conscious presentation, but are vicariously reflected to consciousness through some pre-formed associative link belonging to the heart action. In this case, *hurry*, and the *sense of multiplicity* reflect the palpitations. For the rest, the dream quite evidently bears other signs of kinship to the well-known Dream of Insufficient Clothing. Item 303 shows the bed clothes drawn up around the dreamer, yet in item 302 the element of insufficient clothing appears also. Possibly the most that the dream represents is a simple reflection of exposure to the

EXHIBIT III a—FEB. 6.

Draughty Window Dream

I dreamed that I was sleeping in my own apartment. Everything in the room was just as I had the furniture then, and my windows were all open, as I always have them, all through the apartment.

The only thing that was different was, that there seemed to be a sidewalk between my bed and the window, and a continuous line of people passing by. I recognized nearly all of them, and wished that I felt that I could bother them to put down my windows, as I was very cold. But they were all so busy,—many of them seemingly in a great hurry,—that I didn't feel that I could ask them to do even such a simple thing as it seemed to me. Then you came walking along, and I asked you to close the window. You closed the window willingly and went on your way.

EXHIBIT III b

Draughty Window Dream

SUPPLEMENTARY DETAILS

It was one of those nights, about two weeks ago, when it became very cold before morning.

I was so sure that you had closed the window, that when I awoke, my first thought was: How very cold it must be this morning, for it is still so cold in this room in spite of the fact that the window is closed. Then I looked at the windows, and was most astonished at finding them wide open.

There seemed to be nothing at all incongruous in my dream at having a sidewalk by the side of my bed, or in the fact that people were passing by. All the people were going in the same direction, from the head to the foot of the bed,—and yet I recognized them. There were many of my present pupils, a few of my

cold and of desire for warmer covering, with active circulatory responses. Only one element relating to the particular phobia that we are describing here appears in this dream, and that is problematical. This is the representation of the experimenter (209) in the dream. This calls up in free association "The fact that I am relying on you to help me to get over the unpleasant dream."

As tending to give significance to this association I may say that the laconic treatment accorded the dreamer and the inattention paid by me, as a character in the dream (209), to the dreamer (201) reflected a certain actuality in our social relations. For, as soon as the pathological dream came up, with the question of giving something like professional aid, I naturally avoided any conversation that was not absolutely necessary; partly because I feared the effect of chance remarks in complicating the *rapport* and partly because I wished to make the records of the case more valid by making them as experimental as possible. That is to say, I communicated with Miss Theresa W—— by correspondence as exclusively as possible and took precautions against chance contacts. Thus the present record is not something culled from complex personal relationships, but is on the con-

former pupils (one at present instructor in —— University, whom I haven't seen since last June; but as I was especially interested in him, I thought in my dream of asking him to close the window, but did not venture to); Miss M., Miss W., and that queer Mrs. P. at the boarding house. They were scattered along, and you were the last one, for with the (supposed) closing of the window, the dream ended. You were the only one without hat and coat, though that did not impress me in the dream. Everyone, including myself, was cheerful. They all said "Good morning" to me and made some remark about a pleasant day, except you. You said "Good morning," and closed the window at my request, without saying anything.

I had the bedclothes drawn up around my shoulders.

EXHIBIT III c

Draughty Window Dream

INVENTORY

Scenery, Stage Setting, and Weather:

- 101. My own apartment.
- 102. Sidewalk from bed to window.
- 103. Open windows.
- 104. Cold morning.

Characters:

- 201. Myself.
- 202. People.
- 203. Present pupils.
- 204. Former pupils.
- 205. Instructor.
- 206. Miss M.
- 207. Miss. W.
- 208. Mrs. P.
- 209. You.

Stage Properties:

- 301. People all dressed for street except 209.
- 302. Shirtsleeves of 209.
- 303. Bed-clothes drawn up around shoulders.

trary, a cleancut record of a series of events in which I, as interpreter of dreams, displayed the minimum of influence.

It follows from this situation (which was consistently maintained to the end) that the present record exemplified a virtually spontaneous reaction in what Morton Prince calls the "settings of an idea." What we were looking for was the "settings" of the particular images, itemized in the dream inventory, among which those of greatest interest were the peculiar regular pattern, the putty color, and the changes in skin texture.

HIDDEN RELATION OF SETTING TO EMOTION

The "settings" that will be disclosed presently for these elements of memory appear in turn involved in the sentiment of horror. This raises the question of what relation there is between the sheerly mental "settings" and the felt emotional experiences of the dream. This is a matter of more than passing interest, although, to be sure, it is essentially a matter of definitions and terminology.

William McDougall in Chapter VI of his *Introduction to Social Psychology*, says "We have seen that a sentiment is an organized system of emotional dispositions centered about the idea of some object. The organization of the sentiment in the developing mind is determined by the course of experience; that is to say, the sentiment is a growth in the structure of the mind that is not natively given in the inherited constitution."

Disregarding certain qualifications of this formula, which the author puts in, we may say that the emotional dispositions active in horror, loathing, disgust and so on, seemed here to be organized about the idea of something pasty or of something regularly patterned or of

Situations, Acts and Turns:

- 401. Continuous line of people passing from head to foot of bed, saluting me as they passed.
- 402. My request that you close the window.
- 403. Closing window and passing on.

Emotional Tone

- 501. Apparent naturalness of having sidewalk in bedroom.
- 502. Discomfort on account of cold.
- 503. Cheeriness but hurry of passersby.

EXHIBIT III d

Draughty Window Dream

ASSOCIATIONS

- It was an extremely cold night.
- There was a party that afternoon at the house of one of the school girls.
- Had had a visit with two former pupils three days earlier.
- The fact that I am relying on you to help me get over the unpleasant dream.

something now scaly, now rough, now villous, affecting the skin. If it should turn out (in the "anamnesis" or active remembrance) that the putty color and the regular pattern and the scaly appearance and the projections are memories with a common link, this would give us a clue to the "setting" or "settings" of the items under scrutiny.

But what should be called the "sentiment" in this case?

As I understand McDougall's conception of the emotions and Prince's conception of the registration of memories, it is not inconsistent for me to say that the hidden links in memory (i. e. experiences) are the "settings" of the Honeycomb Pattern and other similar items. Either of or both (A) the obvious, *patent* items of the dream and (B) their hidden, *sub-jacent* settings may be regarded as actively linked with (C) the emotional dispositions, thus forming the sentiment—which in this case happens to be abnormal. (A three-cornered relation is graphically most intelligible).

A debatable question remains as to the degree of activity of (B) the hidden elements. Does the emotion derive directly from the object (so horrible) in thought and thus energize the mechanism of emotional response, or does (A) the horrible object simply emerge into clearness while the hidden setting of experience (B) really pulls the strings of (C) the emotional mechanism? This is a question hard for me to answer, even supposing the most profound understanding of Miss W's dreams. To describe acceptably their mechanism, whatever it may be, one must presume upon a large factor of conventional agreement as to naming and classifying the elements that we have identified. Unquestionably, we discern the *emotion* of horror in the dreams and we are in search of a *setting*, which we may (in our present obscurity) suppose to be a factor in the arousal of that emotion.

EXHIBIT IV AND V

The next dream does not seem to help us on the way. In spite of my care to explore possible "settings" of a *trauma*, I could obtain no such evidence. Miss W's dream is itself not colored by the fear of what might happen to her little niece; that occurred as an aftermath in the waking state. The *vehicle upsetting* in the dream might suggest that possibly there had been some upset in the dreamer's past, in which a vehicle was concerned. The fact that the young girl's dress was soiled admits of symbolical connotations. But any attempt at making

the symbolical meaning do for an interpretation, seemed to take one far from the probable mental setting.

Turning to the physiological side, I thought that I recognized the stigmata of a modified Flying Dream. That is to say, the tipping up of the vehicle under the dreamer's pressure when bearing down upon it, strongly suggests the paradoxical feature of the Flying Dream, in which gravity is defied. But only one who believes as I do that flying dreams are normally caused by vascular and kinesthetic sensations would follow this reasoning. Yet, as I have shown in recent papers on the subject, the physiological sensations of the flying dream (from blood vessel reactions and muscular hypotonia) directly cause many dreams that are, however, not overt and outright flying dreams.

I was satisfied for the time being to judge this dream as a modified flying dream, instigated by the chilly atmosphere in which this subject elected to sleep all through the winter.

RAMIFICATIONS OF THE VEHICULAR DREAMS

The dreams so far have been essentially related in their immediate aspects only to current events.

The next dream, known as "The Sand Sleigh Dream," brought

EXHIBIT IV A—FEB. 15

Auto Sled Dream

INTRODUCTORY REMARKS

Dr. H—, I want to tell you a dream that I had. I haven't dreamed for an awfully long time; in fact, not since I told you my last dream. Last night, I had a dream that made such an impression on me that it caused me to keep in my little niece. She was going out, and I told her she mustn't go out because I was afraid something might happen to her.

EXHIBIT IV b

Auto Sled Dream

I dreamed I was in an automobile; somebody was riding with me; I think it was my niece. I had perfect con-

fidence, but the automobile acted very queerly. It kept tipping; tipping very high on one side, and then tipping on the other side, and the funny part I noticed about it was, that it would tip up on the side where I pressed down.

My niece and some one, Miss H—I think, were on the front seat, and it turned into a sleigh, but without horses and steered by a wheel still. The street was all slush, and finally my niece steered across the street, and the sleigh overturned and Florence's white dress was all soiled.

That is all that I can recall.

EXHIBIT V a—MARCH 12

Sand Sleigh Dream

Scene One. You were sitting in a comfortable chair in my dining room,

the experimenter into touch for the first time with channels of memory leading to the remote past.

At first sight, to those familiar with my paper explaining the effect of goose-flesh upon the fancies of the dreamer, it would follow that the Sand Sleigh Dream (combining images of *granulation* and of *transportation*) must represent the reaction to cold, like the former vehicular dream (Auto-Sled Dream).



ANALYSIS OF THE SAND SLEIGH DREAM

In this scene, the phantasy of a heart-examination by a physician corresponds in a curious way to the actual course of the changes in the heart-beat under chill. Stronger and slower pulsations follow upon the constriction of the dermal arterioles, and are reflected in the *slow motions* of the dreamer just after she has discarded her fancied "tight clothes." Pre-

cedingly, these same *tight clothes* announced the blanching and shrinking of the skin. The "birds and flowers" on the kimono announce the return of vitality through dilation of the blood-vessels, following the vasco-constriction. For the draining of the skin is the first protective reaction to cold, while the flushing of its surface with warm blood is the second.

and I was standing by your side. You said, "Go in the other room and draw the curtains and take off your tight clothes. I cannot prescribe for you until I have listened to your heart."

I went into the kitchen and put on a kimono and wondering all the time why I was obeying you. Then I went back to you very slowly.

Scene Two. At once the scene changed and we were riding swiftly over a desert. You were holding me in your arms, with your face bending over me in

a most protective way, and keeping me warm with a large rug that was around both of us. You were driving two brown horses that seemed to be frightened and you were keeping them from running away with us by talking to them. Then you said, "We must stop here because of the storm." So you got off the sled and unfastened the horses, and turned them so that their bodies would shelter us as much as possible from the wind and sand. Then my alarm clock went off with a loud whirr—and I was awake.



ANALYSIS OF THE SAND SLEIGH DREAM

(In more pronounced chill this stage No. 2 might be annunciated by a floating sensation or a dream of flying).

Other annunciators are: 1. The horses running away—palpitations of the heart when it changes mode of contraction to meet vaso-dilation. 2. The sand-storm—attack of goose-flesh through responsiveness of Sympathetic System. 3. The fancy of comfort and protection—this scene obviously agrees with the automatic seeking after warmth and shelter.

This outline of the reconstitution could be amplified to show the aptitude of the mind for combining into one fanciful picture a hint of all the cues playing upon the sensorium. (See "deadly parallels" in papers of June, 1918, August, 1919, and April, 1920).

(*Legend continued on page 176*)

In this dream the romantic element is apocryphal because without true relation to the situation of the dreamer, if we consider only the meanings that lie on the face of the dream. Looking below to the subjacent context, and viewing there an automatic response to accidental circumstances (chill in the night) we are able to trace a highly specific relation between stimulus and reaction.

Beyond this, however, there is always a possibility that some past unadjusted situation, being drawn back into the memory, may stimulate responses on its own ac-

count which require a complicated resolution apart from the immediate circumstances. This is exactly what crops out in the Sand Sleigh Dream, where several items (the black suit and protective attitude of the man, the form of the sled and identity of the horses) prove to be borrowings from the remote past. Such cases are the ones that led the orthodox Freudians to expect in most dreams an infantile and sexual "latent content."

Here we will call the childhood memories by the non-committal term "renascent content." This did not come to full light till the Dotted Fabrics Dream, three days later (March 15).

For the present, we may say that the meaning of the dream is attained by surveying its context from three aspects: (1) The *patent* content—what the dream narrative means on the face of it. (2) The *subjacent* content—underlying interplay of cue-and-recall systems, traceable to adventitious impressions of the immediate present or recent past. (3) Lastly, one may pick out of these two, and set apart the *renascent* content—or "echoes from the past"—which may put one on the track of unduly persistent reactions to an unresolved bygone situation. (See "resolution of the unadjusted" as discussed in author's paper in the *Journal of Abnormal Psychology* for February-March, 1919).

At this stage of events, if I had been too well satisfied with the view that vehicles simply reflect heart-beats, I might have missed a clue. But applying the Inventorial Technique as I did, the sleigh could not fail to receive its due meed of attention. Its prototype proved on anamnesis to have been a "stone boat" of the type used in clearing agricultural lands of their incumbent rocks—a specific memory of childhood.

EXHIBIT V b—MARCH 12

SUPPLEMENTARY INFORMATION

(Clothes reflect: 1. Cold 2. Warmth)

In scene one you were in a black suit. I had on a most exaggerated street suit, with a skirt so tight I could hardly walk and everything about it was in the extreme except the color; that was brown.

When I came back from the other room, I had on a gay Japanese kimono with a sprawly design of birds and butterflies embroidered on a blue silk ground.

In scene two, the sled was wooden. We each had on long cloaks beside the large rug which you held around both. Sand was blowing around us. The sled was like an old-fashioned stone-boat on a farm.

EXHIBIT V c

Sand Sleigh Dream

INVENTORY

Scenery, Stage Setting, and Weather:

- 101. Dining-room, furnished.
- 102. Kitchen.
- 103. Desert.
- 105. Wind and sand storm.

Characters

- 201. Dreamer.
- 202. L. H.
- 203. Two brown horses.

Stage Properties:

- 301. Black suit.
- 302. Comfortable chair.
- 303. (Curtains).
- 304. Tight clothes. [numbness].
- 305. Gay Japanese kimono (birds and butterflies on blue silk ground).
- 306. Sled (stone).
- 307. Large rug.
- 308. Long cloaks.
- 309. Brown hide (of horses).

Situations:

- 401. Directions for professional examination, and carrying out same.
- 402. Riding.
- 403. Stopping for refuge.

Emotional Tone

- 501. Kind protecting attitude of 202.
- 502. Fright of horses, and 202's control of them

EXHIBIT V d

Sand Sleigh Dream

ASSOCIATIONS

Scene I: I thought it was suggested by the fact of doctor and patient, and that my doctor always tests my heart whenever anything is the matter with me.

I have ordered a kimono to be made for me in Japan, and am naturally much

The appearance of sentimentality in the Sand Sleigh Dream, although absent in the Auto Sled Dream, might perhaps suggest to the reader that a love element dictated the phantasy. But I have already argued against attributing too much importance to the love element in dreams provoked by chill. I have shown in a discussion of the Angry Sheik Scene how the characteristic response to cold bears a certain analogy to the reaction of love and to other emotions. It is, therefore, not strange here that the psychological response should have attained an intensity quite out of proportion to any immediate influence of the love emotion itself. It is another case of Hobbes' circle.

As to *Uebertragung*, I may say that in the clinics where I "analyzed" patients, I learned how very easy it may be for the experimenter to flatter himself that he is the actual object of the feelings ostensibly centering upon him in the dream. In many cases the physician appears in the dreams of the patient merely as a result of the *recency* association—and thus he is not as deeply impressive to the patient as might otherwise appear.

Although the subject, in this case, regarded the investigator's appearance in her dream with some annoyance, I was able to assure her that the romantic rôle in the dream was in reality assignable to

excited about it. The design on the ordered kimono though is dog-wood blossoms, and the color is rose-pink.

Scene II: I cannot explain this scene. The swift horses and running away could be only your attitude and you are not doing so in the dream. I have not seen any of those desert, sand-storm plays, but, of course, I have heard them talked about a good deal.

EXHIBIT V c—MARCH 12

Sand Sleigh Dream

POSTSCRIPT TO LETTER

The stone boat is a part of my childhood. We had a large country place,

and the workmen cleared away the lawns in the spring and autumn of the stones. We have a great many racing horses, and the team was like a little team that we always used when we wanted to go quickly in bad weather. They didn't have much style, but they could pick their way quickly over bad roads. They were a cross-breed Kentuckian and Arabian, and consequently always ready to run away. There were no workmen who would ever have dared to fondle us, but we often rode on the stone-boat and the roller. There was no sand within fifteen miles that I know of; but three or four times every summer the whole family: father, mother, and eight children, or seven, would drive to the lake for a long delightful picnic.

some other person for whom she had substituted me, as a result of the recency association. This proved essentially true; for, by not adventuring into any attempt to explain *Uebertragung* in the usual way, I made it easier for her memory to bring up, (as will be seen) the image of the one who had touched her life deeply and so far permanently.

THE PHYSIOLOGICAL MOTIVE FOR SANDSLEIGH DREAMS

The essential point here is that, properly interpreting the fancies even of the romantic part of the dream, they are seen to arise from the state of chill experienced by the dreamer at the time. The picture of a professional heart examination is readily understandable as reflecting the more pronounced heart beats which frequently follow upon the typical skin reaction to cold. Then there is the apperception of goose-flesh that belongs to such a reaction, as I have elsewhere worked it out. (cf. p. 186). This explains the representation of the *sand*, just as the movement of the horses corresponds to the warming-up stage of the dreamer's physiological response. The final dream element is conscious warmth itself, also mirrored as *comfort* and *protection*.

So far, the dream is indeed a modified form of the Insufficient Clothing Dream. Its explanation bears striking resemblances to that which I gave for the Angry Sheik Scene, in which the physiological reaction to cold leads to the fancies of love and of bride-carrying.

Thus the apparently massive romantic significance melts down under the physiological analysis!

The postscript to the letter of March 12, however, is the part to which we should turn for the possible openings that lead back to childhood associations. First, it must be noted that (to acquit my conscience) I made inquiry of the subject in writing whether there was any possibility of sex trauma (in connexion with the stone boat) on the farm. A negative answer was returned. Through a misunderstanding, the inquiry itself was destroyed.

SETTINGS OF "THEN" AND OF "NOW"

The stone boat item did indeed open up the channels toward childhood. Contemporaneous memories were enlarged upon in the next dream, which is the last that we shall have to consider.

Although I have spoken of "contemporaneous" memories following up the infantile Stone-Boat recollection, it is noteworthy that the dream of the Dotted Fabrics (Exhibit VI) combines in one picture "*my sister as she is now*" (Item 205) with "*my three brothers as they*

were when I was four" (Item 206). There is significance in these anachronisms—at least I have found it to be so in parallel cases. Similar examples indicate that the collocation of personalities of two different dates implies an adjustment of mind concerning events related respectively to the two dates.

This dream revealed settings of ideas pertaining to a childhood sentiment, a sentiment that attached itself to the personality of Dr. George. The presence of the sister in the dream represents the NOW

EXHIBIT VI a—MARCH 15

Dotted Fabrics Dream

My mother, sister, father, three older brothers, and the Rev. George, were all sitting in the large sunny living-room, or hall, of the house of my childhood. It was a beautiful summer day, and the large full-length windows were standing open. Beyond the windows was the broad veranda, and then our lovely old-fashioned garden, and the dusty country road beyond. We were having the pleasantest conversation; mother, and sister, and I were embroidering. I sat where I could see the road, and so was the first to see the three soberly-dressed, sombre-looking women plodding along the dusty road. I spoke to my mother, who at once came to the door, saying, "Why, I didn't know they were coming to-day." We all seemed to be sorry that they were coming, but were polite and guarded in what we said; and in some way it was indicated that it was the minister's wife and grown-up sisters who were coming.

Then I as the four-year-old child ran through the door to the grown-up me, and seizing my hand, looked at it eagerly as one scans the face of a person one is fond of. As she looked at my hand, it became very large and white and

smooth (immense). Every one laughed kindly at the child, who seemed too bashful to look in my face. Then she raised her eyes and gave a glad little cry, and flung herself into my arms and cuddled her face down into my neck and kissed me, etc., etc.

As I held her and kissed her, her dress, which was a little old-fashioned, ashes of roses poplin, changed to a white dress that she was thanking me for making for her. It was an old-fashioned dress of white linen, very sheer, and made up peculiarly. At the same time, a thin white veil appeared over her face. Both the veil and the gown (over the front of it) had embroidered dots, very far apart and not placed regularly. I asked her if she liked the dots, and she said "No," she liked the other dress much better; but if I liked it, she would wear it gladly. While I was looking at the dots, they seemed to grow less attractive to me and did not seem to add to the dress. I asked her if I should put more dots on. She said she did not care; then drew the dress tightly over her right breast which was small but beautifully formed, and said she wished I would not put more than two more there anyway; that would make four, and she pointed out where I might put them, indicating irregular intervals.

and the father's age also suggests the later periods of the dreamer's life. The other characters represent the THEN.

The theory that I hold is that the Dotted Fabrics Dream represents the solution of an emotional conflict between sentiments built up in the long ago and sentiments under question at the present. The nature of this adjustment may be open to dispute and one may question the theory. But it is beyond cavil as a matter of record that the emotional disposition corresponding to horror in connexion with the

EXHIBIT VI b

Dotted Fabrics Dream

INVENTORY

Scenery, Stage Setting, and Weather:

101. Large, sunny living-room or hall in the home of dreamer's childhood.
102. Beautiful summer day.
103. Full length windows, open, showing 104, 105, and 106.
104. Broad veranda.
105. Lovely old-fashioned garden.
106. Dusty country road.

Characters:

201. I as I am.
202. I as a four year old child.
203. My Mother about thirty years younger.
204. My father as he was when he died, 68 years old and feeble but mentally alert.
205. My sister as she is now.
206. My three brothers as they were when I was four.
207. A poet minister, a constant visitor when I was young.
208. His wife and two sisters, whom I do not recollect.

Stage Properties:

301. Embroidery.

302. Soberly-dressed (207).
303. Little old-fashioned ashes-of-roses poplin (changed to 304).
304. Old-fashioned, very sheer, white linen dress (from 303) (altered substance).
305. Thin white veil.
306. Embroidered dots, irregularly placed.
307. Small but beautifully formed right breast.

Situations:

401. General conversation; ladies embroidering.
402. Appearance of three women outside.
403. Entrance of dreamer as four-year-old girl.
404. Conversation between the two (201 and 208) regarding dress.

Emotional Attitude:

501. General peace.
502. Regret at coming of sombre-looking women.
503. Dual personality.
504. Change in hand.
505. Shyness of child overcome.
506. Change of dress.
507. Lessening in attractiveness of dots. (Note the frequent changes,—individual, material, disposition, etc.).

regular patterns and allied imagery disappeared permanently when the revelation was made of the settings of these ideas. (Exhibit VI).

Years afterward I wrote Miss W and obtained renewed confirmation.

This transformation of the total structure of the psychoneurosis seems to be involved in an act of reconciliation staged between the childhood self and the grown self.

EXHIBIT VI c

Dotted Fabrics Dream

ASSOCIATIONS

This is the way it worked itself out, partly while I was still asleep and partly after I was awake and through the next day:

The poet minister, the Dr. George, was one of the leading Unitarians while he was strong enough to travel. His home was in —, but his supervision was over New York and Pennsylvania. While he was in Northern Pennsylvania, he was always entertained at our house and would spend weeks with us, and my father would drive with him in all directions. He was a perfectly delightful man, and I adored him, as most children must have, I imagine. I was a little bit shy, but I would creep around to him and then I would get hold of his hand; and after that it would be hard to get me away from him. The family always expected me to attach myself to him.

His wife and sisters were New England women of the painful conventional type, who visited our house too; but they were usually there while Dr. George was away on his last short trip; and then they would all go home together. When they appeared, Dr. George went out figuratively; and if he couldn't actually get away, every bit of life and sparkle went out of the man. They,

however, never went out of doors, and he was a lover of trees and flowers and birds; so father would usually suggest that we walk around out of doors; then all of us but mother, who as hostess had to stay inside, would troop out on the lawn, winter or summer, and have a lovely time. He had a powerful microscope, and could tell the most interesting things about the world out of doors. (Of course I didn't know all this when I was four, but it continued over many years, and I have heard father talk about those days).

I remember one day, and I must have been very young, he showed us the cups and saucers of the moss on the trees, crowded together; then the wavy, slender, feathery growth on the butterfly wings; and then the skin on his hand and the skin on my soft baby hand; and I am sure there was no disagreeable sensation connected with it. Then I think we were called in to supper, and we probably told my mother all that we had seen, and some one perhaps suggested that we look at something we were eating. It may have been oysters, for we often had them. I was always inclined as a child to eat with my eyes, and that was probably where the horror came in.

We had a mock orange that I remember had that putty color I disliked in my dream horror, and that may have been examined.

THE ABNORMAL SENTIMENT THAT DISAPPEARED

In explaining the existence of the emotion of horror we may visualize it as a product of warring emotions; *i. e.*, conflicting component sentiments. That is to say, because certain emotional dispositions were in conflict, it produced a characteristic mental agony. Further, this mental agony continued to be connected with the mysterious dream images until their settings in memory had emerged from obscurity and grouped themselves in correct order in the recollection of the dreamer. Thereafter, in consequence of the dreamer "working it all out" there was no clash of incompatible emotional innervations, since the Dotted Fabrics Dream, and the acts of waking recollection to which it led, had re-adjusted the incompatible emotional dispositions. The struggle was thus ended. The rival systems of memory were harmonized in presence of each other. The conditions that made the vicious circle of "bodily-mental" agony were brought to an end by the reconciliation of tendencies; in other words by "uniting" the dissociated personalities.

So much then for the superficial description of the processes by which this psychoneurosis became dissolved.

INCONCLUSIVE FEATURES

Many psychologists, lacking opportunities to study cases like these, are still skeptical regarding the conflicts that are supposed to go on between dissociated parts of the human personality. Out of respect for their scruples, it may be well to show (at some future date) how the theory of this case may be reconciled in detail with existing

The dots I had embroidered on the veil and dress of the child looked like this:



My father, two of the brothers, and the minister are all dead.

EXHIBIT VI d—MARCH 15.

Dotted Fabrics Dream

LETTER EXCERPT

The cure is completed. Last night I had a dream that made everything

understandable and nearly everything as clear as day.

I have no more blanks or I would copy it off for you. I wrote it out at once so that I might have all the light possible, and I am completely freed from the horror. In fact, it is connected with such a pleasant event or episode of my childhood, that it is a source of great pleasure to have it brought back.

The whole thing seems so wonderful that I can hardly believe it myself. And I feel as if a great burden had been removed.

concepts of psychophysiology on the one hand, and with the internal evidence of the exhibits, on the other.

We do not need to describe the childhood self as one whole personality and the adult self as another. We must admit a partial division of the *psyche*, at least. Each portion or partition had a group of emotional dispositions attached to it exclusively, which (provisionally) we will call the "daughter-like attachment" and the "lover-like attachment." Through circumstances not uncommon in modern upbringing the means of transition from one type of attachment to the other had not been facilitated and completed by what we now call "education in sex." This is tantamount to saying that the emotional dispositions of the individual were not so equipped as to make a proper transition from one attitude of affection for the male to another attitude of affection (the proposed mating).

Thus the two groups of emotional dispositions could not be united and harmonized, but remained in conflict. The details need not trouble us, now; the thing to visualize is that the subconscious strife emerged into consciousness at first only as (A) Certain patterns or configurations, memories of long ago, and (C) Emotional reactions corresponding to horror. The third element in the triangle of forces remained to be uncovered; in a sense, it uncovered itself, in spite of being in concealment for many years. And then the "resolution of forces" took place.

Meanwhile, I must rest satisfied with having set down the main data of this complex story for the information of students of Abnormal

I am so grateful to you that there is no room for any other feeling. You must really let me help you in some way. I might be able to do some kind of manual work for you, such copying or classifying or indexing your book.

Well, I am grateful anyway.

Your ex-patient,

Theresa W——.

EXHIBIT VI c—MARCH 21.

Dotted Fabrics Dream

LETTER EXCERPT

I don't know whether it helps to

have me write out all the associations; but in this case, it seems important because that is the way the dream worked itself out. I haven't thought of the Rev. George, or his microscope, for years.

Everything seemed just as clear and distinct as in real life, and I have no doubt at all about the connection. The probable connection with food came to me after I was awake. Of course that may not be correct. The other part of it came to me in my sleep but not a part of the dream. There was not the least suggestion of horror, and that is why I can talk and write about it so cheerfully.

Psychology who may profit by this example of the "Psychophysical Triangle." By independent reflection upon the dreams reported here, and in the light of my running comment, they may anticipate whatever further analysis remains to be made.

RECAPITULATION

What is the inside story of this dream from a subjective standpoint? Cutting Gordian knots, and speaking trenchantly, we may say that the horror dream and the events by which the horror was ended represent a conflict between the immediate claims of a matrimonial offer and the (incompatible) demands of a youthful infatuation. The latter was constructed upon the foundation of a memory laid in early childhood, as witness the intense persistent power of the memories of the microscope. On this base, literally, event after event (like a coral island being built up) raised a superstructure of sentiment which gathered to itself feelings of idealistic love as it emerged into puberty.

Evidently, this lay dormant for some time and was not fully realized by the subject. Apparently, the association mass remained subliminal, not however without its influence upon conscious waking attitudes toward marriage. For the patient's attachment to Dr. George persisted and grew throughout the period of adolescence.

INHIBITIONS IN THE MATING IMPULSE

The subject, although attractive to the opposite sex and not without normal mating tendencies on her own part preferred to remain single. In fact, distinct signs of inhibition upon love-making were apparent in her general behaviour and casual conversation. With the years came the not unusual sense of having "missed something in the experience of life" and there also came the cumulative dissatisfaction with the somewhat humdrum resources of her professional life as a social worker. At an age when the fear of losing her beauty was natural, her past interest in her own delicate skin played a prominent part. The offer of marriage came upon these subjacent ideas as an arousal of the desire to be married and to make an end of solitary apartment life. The images of dwelling in a house of her own and of enjoying the tenderness of a man were raised. The subliminal interferences to which we have already adverted, however, were not so easily disposed of. There was one which took the form of excessive scruples regarding the next generation. The eugenic motive for refusing marriage, owing supposedly to her too advanced age and other

reasons given at the time, played an exaggerated part. But any attempt to change the viewpoint on the eugenic side of the question only met with resentment on the part of the subject. There was something more in the background.

CONFLICT AND "RESOLUTION" SUMMARIZED

The conflict therefore continued and the reactions to which we have given the name horror, loathing and the like, were aroused as an incident of this conflict and as a manifestation of the force of the earliest (unknown) associations reflected by the dreams.

The gradual uncovering of the true elements in this conflict threw the scattered items of reminiscence for the first time into the presence of each other, so to say. Taking a leaf out of Dr. Prince's book on the reuniting of the Beauchamp personality, it may be said that what the dream analysis did was simply to permit the two dissevered systems (which had been playing upon each other obscurely and indirectly) to meet in a Peace Conference. This is perhaps one of the clearest cases in which the representation of two systems of ideas constituting partially dissociated personalities come together in dream formations. The treaty of peace that was negotiated in the dream of the Dotted Fabrics would bear the closest scrutiny from the standpoint of the adjustment of warring systems of nerve connections—i. e. of physiological states of memory.

BIBLIOGRAPHIC SUMMARY AND REFERENCES

A series of dreams is presented as narrated by a woman who sought relief from nightmares connected with a chronic abhorrence (phobia) for certain objects and patterns. No attempt was made to explain their possible significance through phallic symbolism. Instead, the dreamer was led to adjust her own mental disharmony through "dreaming it out."

After two months, a "resolution dream" came which completely eliminated the phobia and the nightmare. Yet no recourse was had to the well-known method of *catharsis* as practiced by the Psychoanalytic Schools of Vienna and Zurich. On the contrary, the subject gained relief without acquiring that insight into her own complexes which usually is considered necessary.

Citations of the author's papers refer mainly to the discussions of levitation dreams that appeared in the *Journal of Abnormal Psychology* for August, 1919, and of April, 1920. To the latter paper are appended bibliographic summaries of the preceding papers in that series of dream records.

ILLUSION OF "THE ALREADY SEEN" (PARAMNESIA) AND OF "THE NEVER SEEN" (AGNOSIA)*

BY ALFRED GORDON, M. D.,

PHILADELPHIA

AMONG various manifestations observed in the course of mental affections there are some which may be met with in individuals free from psychoses either as transient episodes of neuropathies or in association with apparently normal states. Such an example we find in "the uncertainty of a perceived impression" also in "the certainty of an impression never perceived." In the first case the individual is not convinced that he recognizes people and objects or scenes which he had seen in reality; in other words he doubts the identity. In the second case the individual believes he recognizes persons or objects which he never met before.

The following few cases will illustrate these curious mental phenomena:

Case I. A young woman of 29, married, highly nervous, observed that when she goes to a theatre or to Church along a certain road well familiar to her she ceases to recognize the same road when she returns home. She follows then the directions in which she came, crosses the same streets, but the latter appear to her new and strange. She stops on her way several times, tries to figure out the streets, but the non-recognition remains over the entire distance until she reaches her house. She observed that this illusion occurs principally when she is under the influence of some strong emotion or when she is physically fatigued. She eventually made a complete recovery.

Case II. A school teacher of 35, married, good physical health, noticed that whenever she left the house of her friend for home she felt she was going in the opposite direction, although in reality the direction was correct. The street she was walking on appeared to her wrong. Like in the first case this would occur only when she was mentally and physically fatigued.

Case III. Man 28 years old, attorney, observed that after spending a whole morning in Court under high tension in trying a

*Read at the meeting of the Philadelphia Psychiatric Society, January, 1921.

case, late in the afternoon would imagine, while in his office, that he is in the same surroundings in which he was in the morning: he felt, that the persons and their gestures were the same, that he himself would use the same expressions, the same arguments, that he experienced the same state of emotion and agitation, otherwise speaking he lived through the same state of activity in which he was engaged in the morning. On another occasion a propos of a violent discussion with one of his clients he perceived a Court proceeding in all its details in which he participated several months previously.

Case IV. Woman of 24, married, has had epilepsy since the age of 16, but the attacks were very rare: one in a year. Within the last six months she developed the following phenomena: on two occasions the near-by-relatives appeared to her as being at a very great distance, thousands of miles away. On another occasion upon visiting another city for the first time, she happened to be taken to a house of an acquaintance where she never was before. She figured out that she knew the house, every room in the house, the furniture in each room, also the relative arrangement and placement of each piece of furniture.

Case V. Woman of 32, married, suffering from attacks of Petit Mal, consisting only of momentary loss of consciousness, presented several times the following phenomena preceding the epileptic attacks. Suddenly in the midst of her family she would conceive an idea that the conversation of her husband or of another relative was literally the same in words, phrases and tone of the voice which she heard years ago.

Case VI. Man of 45, bookkeeper, a psychasthenic, on one occasion while sitting in my office and getting instructions as to the treatment, suddenly exclaimed: "How did it happen that I am now in presence of the President of City Council?"

On another occasion he called out to his colleagues in the business house where he is employed: "Why are you here; I will have you all arrested; you are robbers."

Another time he complained to me in the following manner: "For some time I have noticed that persons whom I meet for the first time, appear to me as if I saw them many times before; it disturbs me considerably so that I am no more able to distinguish the true from the false."

Case VII. Man of 29, clerk in a hotel, a psychasthenic, presented strong doubts in identifying persons. Once in presence of his employer for whom he had been working for 5 years he said: "I am

not totally convinced that you are the man who is the proprietor of this place; I will therefore not say that you are the man whom I see, but I see only an image similar to yours."

His only son died. When he saw the body before the funeral he said: "nothing proves that this is my son's body; I see only an image similar to him."

The seven cases present examples of two abnormal phenomena; in one "the already seen" there is a creation of subjective images poorly adapted to real perceptions. In the other "the never seen" the individual doubts the identity of persons or objects. In case six we find a combination of both manifestations in the same individual.

Irrespective of which of the two phenomena is present, there is a common characteristic in all the cases of this category, namely: an inability at the time being of recognizing reality from unreality, the objective from the subjective. On the other hand a fundamental distinction is evident in both phenomena. In the illusion of "the already seen" there is a transient and a very brief sensation of going over again through a part of one's past life; the individual merely finds in the present his own personality of the past. There is consequently no fundamental alteration of judgment.

In the illusion of false recognition on the contrary, we are dealing with an erroneous belief of a continuous character, but not with a vague impression. The perception is definite and determined, it concerns person or groups of persons, an object or groups of objects, which of course implies a radical alteration of judgment.

An analysis of the mechanism of recognition or non-recognition leads to the following considerations:

In the first case, for example, the patient returns home from Church and automatically crosses the same streets as when she went to Church, but in the reverse direction. The streets, however, appear to her strange. In the second case the patient feels that she goes in an opposite direction leaving a friend's house for home. In both cases the phenomenon resembles somewhat the experience one has in counting numbers in a reversed manner, say from 100 back to one. In the latter the sense of association and consequently the association force so-to-speak are less strong than those of direct association, viz: in the direction from one to hundred. Could the phenomenon under consideration be explained on this basis?

In the first of my cases the automatic walking along the streets in the opposite direction was apparently without any participation of

the images that the streets left normally in her mind since she walked so many times in the correct direction. In other words all perceptions dropped out completely when the direction was reversed and when the associative powers became lessened. However it does not seem entirely satisfactory to explain the sense of non-recognition of old perceptions exclusively on the basis of a change in the direction of those images. Recognition by association of former images cannot be explained exclusively by their resemblances or by their contiguity.

Bergson in his "*Matière et Mémoire*" does not rely upon recollection of images but believes that the sense of recognition is intimately associated with the movements of the body; it is the action of the latter but not the mental representation that makes one capable to recognize perceptions. The sense of familiarity has for its basis an organized motor reaction. He says: "The characteristics of the system of organized movements lie in the difficulty of modifying their order; each movement which follows depends on the preceding movements; each note of a melody for example, is close to the following note in order to watch over its execution. If each usual perception is accompanied by an organized motor phenomenon, the usual sense of recognition has its root in the conscience of this organization."

Ribot also feels that there is no perceptions which is not continued in movements. The series of visual perceptions, which constitute, for example, a street, provokes a series of motor reactions which when preceded always in the same order, became organized. Should this motor organization be disturbed or interrupted in its arrangement and with it the sense of familiarity such as we observe when perceptions appear in a reversed order, the sensation of "never seen," of "newness" is bound to appear.

Janet (*Obsessions et Psychasthénie*) had well described in psychasthenic individuals a sense of incompleteness which is manifested not only in actions but also in perceptions; everything concerning them is incomplète. There is in them a diminution of higher mental power, a diminution of the function of reality, a lowering of nervous and mental tension. Precisely by virtue of these characteristics the sensation of the "already seen" or of the "never seen" may appear simultaneously with other phenomena. These manifestations through the manner in which they appear and disappear, belong to the group of Janet's psycholepsy. In altered psychic tension which is typical of psychasthenics the latter see one object and identify it mistakenly as another or they believe that they recognize objects as well familiar,

although they see it for the first time. Under the term "psycholepsy," many mental experiences of a different nature may be understood and the subject under discussion is one of its aspects.

In spite of the fact that attacks of psycholepsy are met with most frequently in Psychoses and in cases of psychasthenia, nevertheless it must be borne in mind that they may occur as isolated occurrences also in normal individuals under the influence of intoxications according to Janet (*Journal de Psychologie* 1908, p. 89), also as we saw in some of my cases under the influence of fatigue and emotions when there is no evidence of lowering of mental tension. The phenomenon of disturbed "recognition" by itself is therefore not pathognomonic of a fundamental psychic alteration in the personality at the time being, since it may occur in normal states of health. For its interpretation we must call upon several factors simultaneously as we have seen above, namely: a reversed order of perceptions, rupture in the organization of motor reactions, incompleteness of sensations and finally a profound alteration of psychic operations.

The first two views give a clear insight of all the cases in which the sense of "recognition" is involved. The third view explains the phenomenon as it occurs in psychasthenic individuals.

It is interesting to observe that sometimes the manifestation under discussion is associated with Epilepsy in its major or minor form, in which it may act as an aura or else constitute the entire attack of Petit Mal. Hughlings-Jackson (*Brain*, V. xi, 1889) cites a case of an epileptic who presented the phenomenon of "false recognition" as an aura in his major and minor attacks which were followed by total amnesia not only of the entire convulsive period but also of his paramnesic aura. An instructive case of Petit Mal with a paramnesic aura and illusion of "false recognition" is cited by J. Séglas (*Revue Neurol*, 1909, No. 1, p. 1). Collin among others reports a similar case in which the phenomenon under discussion could be considered as an equivalent of Petit Mal attacks in an individual who had major attacks only very occasionally. (*Revue Neurol*, 1913, (T. xxvi), p. 147). The illusion of "the already seen or perceived" in epileptic individuals may occur *à propos* of a real perception either before or after the loss of consciousness. Sometimes the illusion is a phenomenon of a dreamy state: after a seizure the patients may dream during which time they have the impression of having already lived through it. In other cases the illusion is brought on by a real perception but in a state of epileptic subconsciousness.

The disturbance of the sense of "recognition" in Psychoses is a common phenomenon and finds its *raison d'être* in the fundamental change of the personality, but the consideration of this phase of the subject is beyond the scope of this paper; I will not insist on it.

In conclusion I may say that of all the views presented for the interpretation of the mechanism of the illusions under discussion that of the disturbance in the organized motor reactions is the most satisfactory, while that of Janet's psycholepsy is applicable only to cases of Psychasthenia.

REVIEWS

THE UNSOUND MIND AND THE LAW. A Presentation of Forensic Psychiatry, by George W. Jacoby, M. D. Funk & Wagnalls Co.

THE AUTHOR of this book of more than four hundred pages has divided the treatise into four parts.

The first part is designated the General Relations of Jurisprudence and Psychiatry which includes a long chapter devoted to a historical retrospect. And in part two is a differential diagnosis of upward of thirty forms of mental trouble.

This feature of the book is encyclopedic in character covering many topics briefly. It is useful as a reference; it was probably not intended as a classification of mental diseases. The author has given a due amount of space to the neuropsychoses, a subject too often slighted in our text books.

In part three the author has devoted more than one hundred pages to hypnosis and anomalies of the sexual sense. His discussion of hypnosis is an eminently fair presentation of the subject. He lays down the views of the Paris and Nancy schools and leaves the reader to draw his own conclusions. He deals with the various forms of sexual perversions, and shows a clear, sane view of their character in his discussion.

The fourth part is a manual in which he gives in detail models of reports such as alienists are required to submit to courts and commissions. These are valuable to one who has such work to do.

The writer feels that practically it would be unwise to submit such a report in detail in many cases, as those who desire such reports wish merely a simple finding which may be expressed in a few words, is the subject of this inquiry sane or insane? is he responsible or not?

But before a careful man can come to such a conclusion he would do well for his own sake to have prepared his opinion according to the method so well indicated by Dr. Jacoby.

The work is well conceived and should prove very useful to those dealing with the difficult problems of mental soundness and moral responsibility.

EDWARD B. LANE.

OUTLINES OF PSYCHIATRY. By William A. White, M. D. Washington: Nervous and Mental Disease Publishing Co., Sixth edition, 1918; pp. v, 319.

ANYONE WHO tried to write a better general text book of psychiatry than this, the sixth, edition of this widely used treatise, would very likely, in the estimation of most physicians, fail to achieve his attempt. Number One in the Nervous and Mental Disease Monograph Series, it still stands at the head of its class. The preface of this edition is brief: "The changes in this edition have been few, mainly in the way of corrections and to keep the text up-

to-date, the object being to preserve the book in its present form in which it has proven so useful as a text book." Thus we see that even the author of the treatise thinks it good enough as it is.

After a sketchy outline of certain aspects of the mind in its relation to its environment, there is in sequence a discussion of the nature of mental disorder (chapter two), a classification of the mental disorders, a chapter on the causes of mental disorders, and then a simple but perfectly adequate outline of the treatment of the insane, including two terse paragraphs on prophylaxis. Into these first forty-one pages Professor White of the George Washington University and of the United States Naval and Army Medical School condenses much wisdom born of wide experience and effective thought.

The sixth chapter, entitled "General Symptomatology" is a thirty-two page analysis of the commoner symptoms of mental disorder in relation to the psychology respectively concerned in each. One would look far and long for a better discussion or account in such few pages.

Then the "Outlines" takes up seriatim the leading psychoses under eleven chapter-headings: "Paranoia and paranoid states; manic-depressive psychoses; paresis; dementia precox; pre-senile, senile, and arteriosclerotic psychoses; infection-exhaustion psychoses; toxic psychoses; psychoses associated with organic diseases and injury of the brain; the symptomatic psychoses; borderland and episodic states; and idiocy and imbecility." The present writer is of the notion that no clearer or more useful accounts of the psychoses is to be had in anywhere near so brief a form. Other descriptions give more details and more of the infinite variety typical of human mentation, but none I believe tells the stories more pointedly, more tersely, or more usefully for the purposes of the general practitioner, and for the student of medicine and of psychology, and all with the wisdom born of thought and of wide and long experience.

Chapters on the principles and methods of the examination of patients and on a minimum mental examination, (standardized for hospital service); and one giving a convenient transcription of the unrevised Binet-Simon scale, plus the excellent index, complete this valuable treatise in its sixth edition.

Many patrons of the Nervous and Mental Disease Monographs would appreciate having their books in stiff covers rather than in paper. These then undoubtedly would be still more popular and sell in still larger numbers.

GEORGE VAN NESS DEARBORN.

THE BREVITY BOOK ON PSYCHOLOGY. By Christian A. Ruckmick, Associate Professor of Psychology, University of Illinois. Chicago: Brevity Publishers, Inc., 1920. Pp. iii, 114.

THIS BOOK is a sign of the times; with it in hand and brain the Eastport young man may become a "normal psychologist," (or at least informed as to the human mind) between his hometown and Boston whether by boat or rail! The author in the Preface hopes that the brief text will invite the

reader to follow a more extensive course of study in the subject, yet he states that it is designed to give sundry persons "an adequate review of the science as currently interpreted by representative psychologists." Association by dissimilarity reminds one of what Wm. James wrote his publisher Henry Holt about his "Briefer-Course" Ms.: "By adding some twaddle about the senses, by leaving out all polemics and history, all bibliography and experimental details, all metaphysical subtleties and digressions, all quotations, all humor [homo sapiens et multarum literarum!] and pathos, all *interest* in short, and by blackening the tops of all the paragraphs, I think I have produced a tome of a pedagogic classic which will enrich you and me, if not the student's mind." (August *"Atlantic,"* 1920).

Professor Ruckmick's little book consists of ten chapters, two appendices, and an index. After the introduction, chapter one, come chapters on "sensory experience," "perceptual experience," "imaginal experience," "affective experience," "mental arrangement: attention," "mental arrangement: association," "action," "thought," and "the self."

Like so many of the precisionists who are academic psychologists, even in this year of grace 1920, the author wobbles almost wofully between what he really knows and what he has been taught in regard to the subconscious or coconscious phases of the mental stream. On page four he is up to date, dynamic; while on page 59 he preaches (though half-heartedly to be sure) the antique mental statics which (less and less boldly now!) pretends to limit mind to the film of consciousness on the surface of the deep and intricate stream of mind. The buyer of the brevity books, "much in little," who pays his money jolly well may take his choice—and cheap at the price. But he has none the less right to realize better than he may from this volume (perhaps his only authority on the subject all his life) that mental preclusion about subconsciousness is an academic idol, although one already getting dusty if not cobwebby and forgotten in the temples of human intelligence.

The book has a substantial use and in general is well done.

Next let us have an homologous text for all sixth-grade schoolers, so interesting and so humanly suggestive of value even to the ten-year-old, that every colt among them will be so thirsty for knowledge about himself that he will just naturally *have* to drink thereof of the fresh and refreshing streams of human nature! Why doesn't the Carnegie Institution or the Rockefeller Foundation or the American Psychological Association offer a prize for so necessary a booklet? It won't be so easily written as "The Brevity Book on Psychology," but it and its successors will be more useful in orienting the multitude of future men and women in their Magnificent Adventure. If present day psychology can not do this thing and do it effectively,—it should study itself a while.

GEORGE V. N. DEARBORN.

GENERAL PSYCHOLOGY. By Walter S. Hunter, Professor of Psychology, University of Kansas. Chicago: The University of Chicago Press, 1919. Pp. xiii, 351. Figs. 55. Price, \$2.00 net.

THIS NEW contribution to the long list of ⁷(possible) "best sellers" is worthy the consideration of medical folk and of psychologists in embryo who wish a recent inexpensive survey of psychology. Its first 110 pages deal with mind as seen respectively in the brutes; in its applications to individualism, medicine, law, education, and business; in derangement; and in the race and society. The latter part of the text book, 231 pages, is normal human adult psychology, from the biological point of view. As the publishers' advertisement suggests, and rather importantly, "The present account of *general psychology* gives a bird's-eye view of the science and does not limit itself to the subject-matter of normal adult psychology as do most books for beginners. Such a method of presentation has many advantages: (1) It gives an adequate account of the science to that great majority of students and readers who derive their only technical acquaintance with psychology from the introductory books. (2) It frees the student from the erroneous impression that the field termed 'normal human adult psychology' is the whole or even the most vigorous part of the science. (3) It gives the student definite information upon which to base a decision for future work in psychology."

Apparent in the first third of the work, covering the entire field of psychology in its way, is a highly laudable endeavor to cite cases and researches having especial and dramatic interest. Pavlov's famous saliva-dog is shown, some of Watson's maze-experiments, three pages are devoted to Morton Prince's "Sally" and "Miss Beauchamp," one of Janet's hysteria-cases is given, etc.—all of which, with the other material, is well calculated to "take the curse off" the dry-as-dust academic psychology of all too many colleges; and to suggest to many a boy and girl that the science has a "pepp" ery appeal of its own worth cultivation.

The attitude of the author toward behaviorism is distinctly a skillful bit of straddle of the two horses at once—and on the whole this seems wise as long as the off horse, Behaviorism, keeps in his place as applied social physiology. Professor Hunter admits that man is conscious, and on the whole seems to find scientific interest in the fact,—whereas a real behaviorist, (we might almost say *the* real behaviorist) pretends to no such interest, and is for all intents and purposes as materialistic as Thomas Hobbes if not LaMettrie.

On the matter of the James-Lange doctrine of feeling also the author is non-committal of himself, forgetful that the student is always largely dependent on the opinions of others in all such matters in which he is not a first-hand observer or researcher. On the whole he seems to be in favor of the hypothesis.

The basal importance of kinesthesia for psychology is plainly recognized (he admits that it is "fundamental in guiding movement") and yet he fails to give

the movement-sensations the large consideration of description, analysis, and relations they so plainly deserve from modern psychology.

The book as a college text is excellent and can hardly fail to fare well and to wear well in this direction. It is a good nucleus for a fine treatise as successive editions are published.

GEORGE VAN NESS DEARBORN.

HARVEY HUMPHREY BAKER. *Upbuilder of the Juvenile Court*. Published by the Judge Baker Foundation, Publication No. 1, Boston. Rumford Press, 1920. 133 pp.

THIS BOOK, Publication No. 1 of the Judge Baker Foundation, is one of the most welcome in recent years.

The first chapter portrays Judge Baker as only one intimately associated with him and really understanding him could. Mr. Cushman has expressed his affection for Judge Baker by combining feeling and dignity in a rare manner.

The next two chapters give the statistics of the Boston Juvenile Court; those for the first five years having been prepared by Judge Baker personally but never before published, and those for the second five years have been recently compiled and are given for purposes of comparison. Our regret that Judge Baker's review of the first five years of the Boston Juvenile Court could not have been published long ago is appeased by the discovery of its permanent value. The most striking thing about this review is the evidence given of Judge Baker's discriminating judgment and truly scientific mind. No opinion is set forth until it has withstood a thorough questioning.

The next chapter reprints an article by Judge Baker from the Survey discussing the Procedure of the Boston Juvenile Court.

The Book is closed with a chapter by William Healy and Augusta F. Bronner describing the present work of the Judge Baker Foundation. These persons give a most forceful argument for diagnosis and treatment as applied to delinquency.

A. W. STEARNS.

WHY NERVES FAIL—TWO REVIEWS

THE PROBLEM OF NERVOUS BREAKDOWN. By Edwin Lancelot Ash, M. D. The Macmillan Company, New York, 1920. 299 pp.

FUNCTIONAL NERVE DISEASE. An Epitome of War Experience for the Practitioner. Edited by H. Crichton Miller, M. A., M. D.; formerly Medical Officer in charge Functional Cases, No. 21 General Hospital, Alexandria; Oxford University Press, London, 1920. 208 pp.

IF WE read two books on the same subject," writes J. C. Hare, "the second leads us to review the statements and arguments of the first; the errors of which are little likely to escape this kind of *proving*, . . . while the truths are more strongly imprinted on the memory, not merely by repetition . . . but by the deeper conviction thus wrought into the mind, of their being verily and indeed truths. . . ."

No two books could serve to impress such truth as there is in the discussion of functional nervous diseases so-called, better than "*The Problem of Nervous Breakdown*" and "*Functional Nerve Disease*," read in company as advised by Hare. For on the subject of the disorders of so-called nervousness one needs every mental assistance that the counselors of Right Reading can supply. The reason is plain. "Functional" disease is still a subject of almost acrimonious disputation; which means that it is a topic fraught with confusion and needing intellectual first aid. These British medical men seem to give it.

Neither of these two excellent volumes falls into the error of deciding the age-old philosophical question of mind and body through any sophomoric description of the way the brain works, whether it be through the orchestration of neurones or the symphony of synapses. The English authors of the discussions we are now turning to have conducted their restrained comment on all the topics of psychological disorder in peace or war, with a full sense of the danger of getting lost in the immense speculative field that surrounds the topic of the psychoneuroses. They are, in the main, content to make practical descriptions of the various functional nervous diseases that are found in civil and military life. Both works are written in a manner highly informative to the practitioner who may be called upon to deal with psychoneurotic cases.

ORGANIC VERSUS FUNCTIONAL

The work of Edwin Ash should prepare one for an intensive reading of the Oxford Medical Publication. He deals discursively, informatively, and convincingly with functional disorders as such. His presentation suggests in what

way many idle distinctions that were potent before the war have been swept away by the immense war-time experience with seemingly functional disorders. This has resulted in a strictly practical and not over-philosophical approach to the question of *organic* versus *functional*. Dr. Ash's account leads us to attach more than a passing significance to the fact that the editor of "*Functional Nerve Disease*," Dr. H. Crichton Miller, was formerly medical officer in charge of Functional Cases, No. 21 General Hospital, Alexandria. This implies a rather frank cutting of the Gordian knot that has ensnarled the meanings of functional and organic. And this will be our excuse for passing by any needless preliminary fine distinction.

The main thing about disease is how to treat it. In stating the problem, Ash dwells on the importance of nerve health as a key to efficiency in the new age. He makes the economic aspect of nervous breakdown a matter of national importance on the one hand, and of "psychic control" on the other. This is something a little different from ordinary neurology: it unites the ideals of the new public health (largely taught by the War) and of the psychological viewpoint that owes to the War its affirmation. The problem stated, the author shows his adherence to progressive methods by dwelling next on the emotions. In this discussion he maintains a very balanced viewpoint, as indicated by citations from Déjérine, Mantegazza, Paul Dubois and James. One is glad to note his citation of Dr. Charles Burr as "authority for the statement that in the United States, just as in this country, emotional stress is a much more important factor than physical over-work in the production of neurasthenia." Instances are cited to prepare the reader for a deeper discussion of this same principle. His list of specific nervous casualties (p. 35-37) is appropriately followed by a chapter on "Nervous Temperament"—suggesting the constitutional basis—and another chapter on "Some Factors Determining Breakdown"—leading the reader gently up to a conception of the nature of experiential stress, or stress of campaign.

In Chapters Five and Six he goes still deeper into "conditions Predisposing to Breakdown" such as (a) occupation, climate and constitution and (b) poisons, shocks and some others. It is as if the author were anxious by this deliberate preparation to avoid the charge of being an extremist in attributing too much to so-called purely psychic causes.

It is not till Part II that "The Varieties of Nervous Breakdown" receive intensive study. Even so, the author does not depart from the just balance of interest which is maintained throughout the book. He summarizes the forms of nervous breakdown in the familiar terms neurasthenia, hysteria, psychoneuroses, psychasthenia. Originality in describing the topics of various chapters is not to be expected. But it is refreshing to realize through this volume that England is not one of the countries where a physician's description of the neurasthenic state, of morbid fears and doubts, of nervous indigestion and hysteria has to abound in references to Freudian theory. This writer realizes that a "new heaven and a new earth" have not been created by the psychoanalytic propaganda.

A discussion of the Freudian school is relegated to a condign position in Chapter VII of Part II under the heading, "What then is Hysteria." This is preceded, as the true historical order would require (in Chapter VI entitled "Multiple Personality") by a discussion of the views of Janet and Morton Prince concerning hysterical dissociation. One is inclined to recommend to some of the skeptics of the Philadelphia medical centre, Dr. Ash's excellently proportioned summary of the "Sally Beauchamp" case. There are still neurologists who affect to regard such extraordinary splittings of the psyche as negligible phenomena in the study of functional disorders. Perhaps this attitude is possible only because there are so few writers who are able to draw as just and conciliating a picture of extraordinary mental phenomena, as Dr. Ash is able to do.

ASSOCIATION NEUROSES

It is perhaps not the author's fault that in discussing the work of Janet and of Prince he should have overlooked a very useful term applied years before the present vogue of "Freudian complexes," namely that of *association neuroses*—a term coined by Prince, especially applicable to his and to Janet's observations and free from any taint of dogma or bias. Yet disorders of association are indeed well depicted by Dr. Ash as the main focusing point for a discussion of so-called functional nerve disorder. The field of the association of ideas is indeed a common ground on which both the partisan of *somatic* causes and the exponent of *psychic* causes can meet without fighting. If Dr. Prince had cared to give his own term as active a circulation as the German propaganda has given to Freudian terms, perhaps this meeting point would have been a more crowded rendezvous.

Ash gives a large place to occupational fatigue as a factor in the formation of what we call association neuroses. Part III rightly takes the view that the beginning of the hygiene of nerve is preventive work. In the earlier part of this book there have been ample indications of what is to be forefended. It may seem amusing to American readers to find that this author does not hesitate to speak of "brainstorm" as the thing to avoid. Apart from the ridicule which attended the first use of that term in an American law court, there is not the slightest reason why the term should not serve well—as it does for Dr. Ash—as substitute for more pretentious phrases such as nervous crisis, mild melancholia, conflict of ideas or what not. Certainly, in the analysis of mental weather the psychologist and the neurologist both find that brainstorms are definite causes of new symptoms—regardless of what may be the predisposition thereto.

It is stimulating to find this author clarifying the conceptions implied by the word *brainstorm*. While not neglecting "diet and some other points in convalescence" (Part III, Chapter IV) he suggestively enlarges upon fatigue as a cause of disturbance. There are two chapters on the rest cure (not omitting references to Weir Mitchell); two more chapters deal with "Sleep and Sleeplessness," "Rest and Recreation" in eclectic fashion. Childhood and youth receive a due proportion of attention with especial reference to the danger of overstrain,

and to the critical period of adolescence. His view is not over sexualized; it may even seem to some critics that he does not sufficiently sense the sex element that may often underlie the processes of nervous breakdown begun in childhood.

His final chapter of purely civilian psychology is a presentation largely of the will-to-be-well, as leading the "Principles of Self Help." If we stopped here and thought the book was over, the ending would seem a little tame. Surely, one would say to oneself, something more concrete, something more specific, even if it has to be more dogmatic, must be given us as the word of enlightenment about nervous breakdowns. Does not the book spread itself out so thin over the various ways and means of preventing brainstorms that a given individual faced with a given problem would hardly know how to go about it to make use of the excellent suggestions and all too general counsels contained in this smoothly conceived and urbanely written volume?

THE CENTRE OF INTEREST

But there remains the section on War Neuroses and it is this that we shall find it possible to compare, short as it is, with a whole volume devoted to functional nerve disease of war. An inspection of the chapters on "The Effects of War Strain," and "Shell Shock" shows that the author has assimilated the lessons of war strain or war neurosis without difficulty into his own general system. These chapters, which are virtually chapters of conclusion, are a splendidly even toned preparation for the next volume which we are considering here. Dr. Ash stresses the enormous factor of predisposing conditions in war neurosis, but conversely, he makes a strong point of the fact that the psychological element commonly determines the nervous disturbance, even where the breakdown has apparently occurred as the result of one big explosion. Another valuable point confirming pre-war knowledge of functional nerve disorder is the observation that the psychic effects of shock and strain are apt to gather around existing ailments.

The writer refers to war strain of civilians, and to the possible effect of a low war time fat ration on the nerves of the community. He says interestingly, "Although not a few individuals suffered thereby, it is equally true that the national nerve as a whole was strengthened rather than otherwise by the experiences of red-hot war in our midst."

The final chapter on shell shock makes us realize that this work is no superficial summary of miscellaneous views about "nerves," smooth going and complacent as it may appear. Its very generalities seem to testify to the fact that the problem of nervous breakdown is after all not to be solved by highly specific attention to one or two measures, but through broad attention in everyday life to many preventive measures in order that events may not conspire to overload that delicate network which we call the human nervous system.

LET US take heed and instruction from the exhibits of war's outrageous experiment in bringing to bear upon the nervous system every form of overload that imagination can conceive. To understand more definitely the nature of nervous overload, we must turn to a book that concerns itself with the detailed experiences of the war.

Such a book is "*Functional Nerve Disorder*" by about a dozen authors, who have been through the great revolution of thought about functional disease that the war cases have inevitably brought about. All that we find lacking in specificity between the covers of Ash's book is more than supplied by Crichton Miller's symposium.

That is again, I believe, a good reason for reading these two books in combination.

Yet if one should be at a loss when passing from the "Physical Factor" (Chapters I, II, III) to the "Hysterical Factor" (Chapters IV-VIII) and from "The Anxiety Factor" (Chapters VIII and IX) to the "Management of the Neurotic" (Chapters X and XI) there is a steadying Summary by William McDougall. There could be no more competent pen to unify this varied offering, and to restore one's orientation, in case the interest of details has made one lose his way.

Functional Nerve Disorder is a most exceptionally valuable symposium. In the words of the summary (from which we shall borrow without further acknowledgment) "the several writers have presented, each from his own point of view and in the light of his own experience in the cases of soldiers suffering from neuroses, that extension of understanding and interest in the neuroses which, it is hoped, is one of the permanent benefits brought by the war.

"It is the inevitable consequence of the present very imperfect understanding of these conditions that the several writers are not in entire agreement with one another. . . . The Editor and his contributors have felt that these divergences of view should not be concealed from the reader; that this method of independent presentation of the several main topics by as many independent writers gives a truer and more useful picture of the present state of knowledge than the more consistent but necessarily one-sided exposition that might be achieved by a single hand."

The general impression that results is that the book as a whole carries out the dictum of a New England poet: "Do not be consistent, but be true." For all the papers reflect clearly the genuine absorption of the writers in their themes and their evident searching for the significant thing in each case.

"Wide as are the differences of opinion and practice expressed or implied by the writers, there is nevertheless much that is common to them all. Let us see what are these main points of agreement. All are agreed that, although physical strain and shock have played a considerable part in the production of some cases of war neurosis, *mental disturbance of some sort is the more important condition of the onset, and largely determines the nature of the symptoms in the great majority of cases.*" (Italicized by the reviewer).

McDougall's comment on the *Physical Aetiology* chapter of H. Crichton Miller is of peculiar interest as coming from the author of *Body and Mind*.

"Dr. Crichton Miller recognizes the occurrence of a certain number of cases of pure "shell-shock," in the sense of cases presenting symptoms of nervous disorder (without physical signs of organic nervous disease) which seem to result directly from the physical action of concussion, whether acting directly upon the central nervous system or through the medium of the circulatory or other systems. If we recognize such cases, then I think we must admit, more explicitly than Dr. Crichton Miller has done, the probability that an element of such physical concussion enters into a large number of military cases in varying degrees, as it certainly does into most of these cases of neurosis which follow upon gunshot wounds of the head."

Professor McDougall goes on to mention a second, a third and a fourth class of physical agents as "also generally recognized" to be influential in the aetiology of war neurosis, to wit: physical fatigue from prolonged bodily and mental strain, (especially if there is loss of sleep); disturbances of the glands of internal secretion (sometimes themselves disordered from mental causes); and finally poisons (poison gas, syphilis, the toxins of malaria, dysentery, influenza, etc.). But it is highly significant that he can say:

"It may be doubted whether these or any other physical influences could of themselves produce, in a man otherwise in good bodily and mental health and of good constitution, a condition which could properly be diagnosed as a neurosis. But any departure from bodily health may, by inducing anxiety in the mind of the patient, especially perhaps a secret, unexpressed or even subconscious anxiety, favor the onset of neurosis."

"On the other hand, it may equally be doubted whether, in a man in perfect physical condition and of good constitution, any of the mental disturbances, conflicts, or disharmonies, which play so great a part in inducing neurosis, could of themselves bring about this result, if they did not in some degree, by deprivation of rest, disturbance of circulation or some other bodily function, evoke the co-operation of bodily factors."

"In all this question of the bodily and mental factors in causation there is, I think, no fundamental disagreement between the writers. They differ merely in regard to the importance they would attach to these respectively, and the degree of therapeutic attention to be paid to them. The main thing in this connection is to realize the intimate and constant action and reaction between mind and body, and their reciprocal dependence for all healthy living. For the physician, like every other person practically concerned with human beings, is compelled to accept the notion of interaction between mind and body as at least an indispensable hypothesis, no matter what his taste in metaphysics may be."

Thus speaks in judicial pronouncement, a psychologist and philosopher who is also a physician and who was during the war at a coign of vantage, both at the Front and in Base Hospitals, from which he could obtain the fullest insight into

the conditions that are treated of in "*Functional Nerve Disease*." This part of his summary, as quoted, certainly places in their proper perspective the three chapters that form Part I, "The Physical Factor."

PROPORTIONING THE PSYCHOTHERAPEUTIC VIEW

The major part of the volume is occupied with topics of deep interest to the psychotherapist. It turns out that the authors are not unduly given to "psychic" as distinguished from "somatic" interpretations:

"In the same way the writers are, I think, agreed in recognizing that, though congenitally and developmentally unstable persons are much more liable to neurosis than the normally healthy, yet any man of the most normal constitution and healthy development may, under sufficiently prolonged and severe strain of his bodily and mental constitution, become neurotic. *To admit this is to repudiate the view, dogmatically held in some quarters, that the origin of a neurosis is always to be traced back to some error of development in childhood.*"

The italics are ours, and the disclaimer applies to the psychoanalytic theory: "In other words, the teaching of the book is not Freudian, it does not require readers either to pervert wholly the meaning of the words sex and sexual, or to see the origin of neurosis in a very hypothetical sexuality of infancy. *To say this is not to deny that the writers have accepted and made use of some of the valuable conceptions which we owe largely to Professor Freud, notably the conceptions of repression, regression, unconscious mental conflict and complexes.*"

However accurate the last italicized statement of Professor McDougall may be, as reflecting the contents of this notable and suggestive volume, one might readily wish to pause at this point and qualify the implications that seem to emanate from the above. Is it true that "we owe" these conceptions to Freud? On reflection, one must admit that certainly these authors, whom Professor McDougall summarizes probably *do* owe their impetus in studying the above mentioned mechanisms to the Freudian propaganda. This propaganda was more effective than the work of Janet, Dubois and others simply because it was more radical, more trenchant, in fine less cautious and scientific, and did not hesitate to employ terms of pretentious and often hollow meaning with a disregard of intellectual decorum that was at times nauseating to the person of trained mind. But, somehow, this very quality was a good advertisement and by stimulating the passions facilitated a sharper attention to the problems in question. Our authors, although living in England (where the propaganda dragged more than in the United States) were stimulated to apply any and all available knowledge and seemed to grasp most readily the convenient formulations of Freud; but they did not "swallow" the whole Freudian story too naively. Experience was their best teacher in war neurosis, and they used Freudian tools often only for emergency purposes. The peculiar flavor that this lends to the book is explained by the summary.

" . . . it may be pointed out that some of them use a terminology

which perhaps may seem to imply the acceptance of more of Freudian doctrines than they actually express; such terms as 'mental mechanism' where mental process is meant, 'transference' to denote the setting of the patient in a relation of goodwill toward his physician; Dr. Crichton Miller's use of the term 'homosexual' and 'mother-complex,' and the term 'psycho-analysis' itself; all these give a Freudian flavour to some of the essays which might mislead the hasty reader."

Here we pause . . . it is well enough indeed that Professor McDougall should reassure us concerning the seeming Freudistic trend of the authors . . . but can one so readily bereave the Freud-Jungian devotees of their exclusive right to define their own word? Is it possible without a process of treaty and adjustment to make *homosexual* lose the distinctive flavor that has so long clung to it. Can the Cult afford to fire that word from its shifting evanescent "now-you-see-it-now-you-don't" meanings. Or does Professor McDougall feel that the time has come when (the patents having expired) needed improvement in its use can be made by whomsoever has the wit to see what the times demand? Evidently, there is a move afoot to give us now a conception of varieties of *sexual* and *sexuality* that are not necessarily erotic, or that may be more or less so:

"Let us remember that every relation between two persons is between two persons of either the same or the opposite sex, and is therefore in this sense either homo- or hetero-sexual. This incontestable fact should neither startle us nor betray us, by way of an elementary logical fallacy, into accepting the view that all human relations are sexual in the sense that the sexual instinct is concerned in them."

"There's glory for you!"—as Humpty Dumpty said to Alice in Wonderland; which being interpreted (by him) meant: "There's a nice knock-down argument for you!" To which we, like Alice would say: "The question is whether you *can* make words mean so many different things."

"The question is," said Humpty Dumpty, "which is to be master—that's all."

A TRENCH-RAID ON PSYCHO-ANALYSIS

Indeed, such is the situation. It is a case of the strong hand. In practice these authors have boldly taken such terms as fitted their efforts at the exposition of war neurosis. They evidently realized that they could make a raid on the existing made-to-measure Psycho-analysis of their erstwhile confrères in Viennese centers, on the other side of the trenches. But they have taken these questionable terms forcibly away from the Freudian system.

In acknowledging this situation so plainly, Professor McDougall has cut a Gordian Knot; he has ratified the severance of these terms from their first point of attachment. Does he not do a service in this respect, seeing that the writers who hitherto could camouflage indefiniteness must now resort to a more exact use of the only terminology that is left for the sex-instinct, namely homo-erotic and hetero-erotic.

But will the rest of the world of psychology follow suit? This remains to be seen. The agreement among this dozen authors should go a long way to make the change fashionable. They are a valiant band and have intimate acquaintance with the phenomena they try to describe.

The very verve and competency which is imprinted upon this collaborative work makes it difficult to treat adequately in review. It is no mere collection of chapters: it is rather a many-sided photograph of the problem of Functional Nerve Disorder. Nor have they stopped at the open parts of the trench: they have gone right into the dugouts of the Unconscious.

The result of the raid is illuminatingly reported by Major McDougall:

"Another point of agreement is that the mental processes which produce and maintain neurotic symptoms are not always such that the patient can, with the best will to do so, give any account of them; in other words, these processes are largely 'unconscious.' With the use of this word we are at once upon difficult and slippery ground. The word has been used in so many different senses, and connected with so many speculative notions, that it is perhaps desirable to repudiate every other use but that in which it stands simply to exclude clear awareness; especially is it unnecessary to write the word with a capital letter, and to regard it as standing for some mystical all-powerful entity."

Thus explodes one ammunition-dump in the psychoanalytic camp!

CONSTRUCTIVE FEATURES OF THE WORK

It would be a great mistake to suppose that these authors have been destructive merely: they have contributed on the contrary to the strategy of the great campaign to advance the understanding of the psychoneuroses, especially the neuroses of war that serve to summarize the hidden ailments of daily existence. They have not waited for definitions and haggled over delimitations of scientific territory.

The excellent plan of placing a syllabus of contents at the head of each chapter, is not the least attractive feature of the volume. We can thereby easily see where each author stands.

The authors in their several chapters are perhaps not quite as eclectic as Professor McDougall in his final analysis. Had they turned for their reading to Janet or to Prince on a more extensive scale, they might have found terminology there that they could have taken over without the extraordinary emendations and adaptations and modifications in which the book (outside the summary) abounds. It might not have been necessary for Captain Prideaux in "*The Mechanism of Hysteria*" (Chapter IV) to place so many topics under the head "Sublimation. The Process of Harmonizing the Complex." Under "*Symptom Formation and the Psychological Type of Individual*," it might have been possible to fit in many other classifications than "Conversion Hysteria" and "Anxiety Hysteria," both somewhat over-particularized conceptions. Yet Prideaux explains himself through it all and shows he is not restricted to a narrow view. He is liberal in his attention to other points of view than the Freudian.

Captain Hadfield's "*Treatment by Suggestion and Persuasion*" is a good slashing summary of the practical points in treatment by Suggestion, Hypnotoidal Suggestion and Hypnosis.

In Chapter VI, Dr. W. H. R. Rivers seems somewhat to complicate the underground workings of the mind by introducing as twin conceptions "Repression and Suppression."

"Regression," a subject rather lost sight of in recent years among psychological writers outside Psycho-analysis, comes in for a very strong handling from Maurice Nicoll. For those who have felt that the conception of regression as expounded hitherto was rather fanciful, this new treatment of specific instances in war neurosis will repay careful study. It is evident here and there throughout the book that the authors could produce a considerable body of data to build up the concept of regression to a new height of importance.

The editor's other chapter *The Mother Complex* (Chapter VIII) gives brief case histories of twenty-eight military cases in which abnormal mother dependence and what it entails has given rise to neurotic susceptibility in the son. It is noteworthy that many of these cases had drunken fathers. The social and educational implications are very impressive.

The concluding section, containing the chapters on Institutional and Individual Management of the Neurotic are written with clear common sense and round out this vigorous presentation of the varied aspects of Functional Nerve Disorder.

In residue, the striking thing about the book is the whole-hearted acceptance of that conception of unconscious mental processes that John Locke, in his day, labored so hard and so successfully to obliterate from scientific belief. It is hard to do justice to the multiform presentation of the authors' faith in this matter. We can do no better in conclusion (to pay our respects to this outstanding feature) than to add another extract from the splendidly balanced summary of Professor McDougall:—

"It is impossible to deal with cases of neuroses without soon being brought to infer the reality of processes which resemble conscious mental processes in every way except that the patient can give no account of them. How these processes should be regarded, whether as unconscious physical, as purely physiological or nervous, as subconscious or co-conscious, or as all these in turn—these are questions of the deepest theoretical interest, but of little practical importance to the clinician. For him the important thing is to understand the part they play in producing and maintaining neurosis, and to recognize the evidences of their operation. This he cannot hope to do without such guidance as is afforded in the foregoing chapters; for the discovery of these principles has been one of the most difficult achievements of modern science to which many brilliant intellects have contributed."

L. H. HORTON.

BOOKS RECEIVED

- The Problem of Nervous Breakdown.* By Edwin Ash, M. D., The Macmillan Co., Pp. XII plus 299. \$—.
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- Sanity in Sex.* By William J. Fielding. Dodd, Mead & Co., Pp. XV plus 333. \$—.
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A MODERN MYSTIC

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THERE exists probably no single account of mystical experience equal in scientific value to "*Une Mystique Moderne*"¹—not even excepting the classical autobiographies of St. Theresa and of Mme Guyon. It owes its distinction to a rare introspective gift, a scientific curiosity, and a relative independence from traditional interpretation quite unusual among mystics. If to this is added that Professor Flournoy has supplied explanatory notes and a penetrating critical study of most of the important questions raised by the document, the significance of this contribution to the literature of mysticism will be manifest.

Our purpose, limited as it has to be, regards nevertheless a central problem, namely the claim, made by all mystics and by some philosophers and psychologists of high reputation, that in mystical ecstasy something superhuman comes to expression.

Mlle Vé is an unmarried woman of good education and robust health in spite of a strong tendency to mental dissociation. She was brought up in a somewhat severe Protestant atmosphere. For a few years French governess in foreign countries, she became later on the head of a religious educational institution in her native land, French Switzerland.

In every conspicuous Christian mystic a connection can be drawn between sex-love and religious ecstasy. In Mlle Vé this connection is of the clearest. The salient facts of her life, as far as they bear upon the topics we propose to discuss, are the following:

¹Th. Flournoy, *Une Mystique Moderne*, Archives de Psychol, de la Suisse Romande, Tome XV, 1915, pp. 1-224. In the quotations the italics are those of Mlle Vé.

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1. A tenacious clinging to a high moral ideal.
2. A dastardly attack of which she was the victim at the age of seventeen-and-a-half, when yet ignorant of the sex relation.
3. A conviction of unspeakable guilt, which, she thought for long years, attached to herself because of her misfortune.
4. The appearance soon after her forcible initiation to sex knowledge of periods during which she was the shamed puppet of sex-desires. These periods, more and more sharply separated from the rest of her life, approached the nature of a secondary personality. During these attacks, lasting several days and at times over a week, she retained sufficient control of herself to involve in them no one but herself and to conceal them from everyone, even though alterations of her physiognomy and of the tone of her voice attracted the attention of her friends.

In 1910, at the age of forty-seven, she appealed to Professor Flournoy in the hope that hypnotic suggestion might become the means of her deliverance from sex-attacks that had recently become surpassingly distressing, and also in order to help her break a morally dangerous friendship with M. Y., a married man,—a relation begun quite honorably but in which her heart and her senses had become so far engaged that she felt herself powerless to resist longer. The writing up of a detailed account of her experience was suggested to her by Flournoy, in part for scientific purposes and in part as a means of exorcism.

In the Fall of 1912, as she was carrying out with success, but not without struggle and a sense of desolation, her resolve not to see M. Y. any more, there came to her at night, before she fell asleep, a friendly presence. She calls it the Friend.² His approach was not made known to her through the senses. She felt him somewhere in space and yet within herself. She talked to him more than he to her. The Presence was soothing, purifying, and made no appeal whatsoever to sex; for, the Friend, though "virile," was neither male nor female. Mlle Vê knows too much and is too keen an observer to mistake this creation of her heart's desires for an objective reality. She says, "I wish I was not so sure that he is merely a split in my per-

²In the initial elaboration of the Friend the thought of her father, for whom she had a profound admiration and affection, played an interesting part. The Friend appeared usually in the early stage of sleep, as she hovered between self-consciousness and sleep.

sonality, so that I might take it more seriously; but I see the ropes too clearly."

In March, 1913, the Great Experience took place for the first time. She had remained self-conscious during the visits of the Friend. On this occasion, her body became partly anaesthetic, and, later, all consciousness disappeared. On returning to herself, she was conscious of having been visited by a Presence other than the Friend. This trance, identical in essential particulars with that of the Christian mystics, was reproduced thirty-one times, at irregular intervals, between March 1st, 1913, and July 30th, 1914.

The Experience was for a while placed beyond possibility of critical examination by its amazing strangeness and overpowering violence. But soon Mlle Vé realized that the Power was impersonal, whereas what she needed was the Christian God of Love. Moreover, a connection between the Experience and sex was forced upon her unwilling attention. From that moment the charm was broken; and a resistance, almost entirely involuntary, to the subjugating impersonal Power was engendered. Having reached this stage, the Great Experience ceased and she returned to the historical Christ with whom she had had, in early years, satisfactory communications of the kind more or less ordinary among Christians. A diary written twenty years before contains such entries as the following:

"February 18, 1897. How could I express that which my soul has experienced this morning soon after awakening! God took me for a moment to Himself. I do not know how, but I felt his presence. . . . Take me, fill me with the fulness of Thy consuming presence. . . ."

"May 22, 1897. Thou hast granted me the glorious grace of Thy presence . . . for an instant only."

This presence was not of an overpowering power, destructive of consciousness, but of a tender, comforting Spirit.

Many questions raised by the trances of Mlle Vé are placed by her careful and detailed account in a light favorable for an answer. One of these refers to the causes of the elaboration of the Friend and of the impersonal Power, and, finally, of her return to a more ordinary communion with Christ. We have already given some information in explanation of the friendly Presence. Simultaneously with an increasing dissatisfaction with the Experience, came its increasing rarity; and it ceased altogether as the World War broke out. The obvious share played throughout by auto-suggestion warrants

the supposition that the turning away of her attention from herself to the great, tragic drama that was beginning, minimized the auto-suggestive sources of the Experience. In this connection her age should be mentioned. She had completed her fifty-second year, without, however, having ceased to menstruate.

* * * *

Our main attention is to be given to the interpretation Mlle Vé offers of the Experience. We shall find it convenient to consider in succession the following questions: Why does she regard her Experience as a manifestation of an *impersonal*, superhuman power? Why does she insist upon the divineness of that power? Why does she claim absolute certitude regarding her "revelation"?

The mystics have always claimed a noetic value for their experiences. "It is," they have said, "a revelation;" and, they have added, "its certainty is unassailable because it is not a deduction nor a generalization from facts; it is itself a datum, an *immediate* experience." In this they have had at all times the support of a number of philosophers. Their case has recently been stated by William James in words that have gained popular success. "Mystical states, usually are, and have a right to be, absolutely authoritative over the individuals to whom they come." They break down the authority of the non-mystical or rationalistic consciousness, based upon the understanding and the senses alone. They open out the possibility of other orders of truth."³

In order to ascertain how far the Experience of Mlle Vé countenances this widespread opinion, we must transcribe with some fullness of detail her account of the first Experience. On the 1st of March, 1913, she had just gone to bed when, not feeling inclined to sleep, she wished the Friendly Presence would manifest itself. "I concentrated my thoughts and my will upon that object, remaining motionless, the eyes closed, and trying with all my might to avoid distraction. A fairly long time passed. I was beginning to find the effort very exhausting and I was on the point of giving up, when I felt a sort of *shiver and languor*. I could *no longer move*, nor could I will with any definiteness and energy. [She compares this paralysis and sense of well-being to what she experienced once, after taking morphine]. But my thoughts remained active and even very lively in the circle in which I was interested—I felt the Friend coming from

³*The Varieties of Religious Experience*, pp. 422-423, abbreviated.

the door to my bed. When I felt him there, and could commune with him, it seemed to me that I was but a soul without body—I had the impression that my spiritual being was free from the bonds that connected it with matter and that it had entered another world. I did not hear a dialogue nor a monologue, but I had the feeling of a kind of *liberation* because *he* had come, and I was no longer aware of my limited self, circumscribed by matter. I was passively conscious of *another essential and immutable reality*. The words of St. Paul came to my mind, “I was caught up to the third heaven, whether in the body or out of it, I cannot tell. God knows.” I saw nothing, heard nothing; I was neither asleep nor in a swoon, and yet I was *elsewhere*, I was *changed*. [According to her account she lost, at this point, entirely consciousness]. When I regained possession of my ordinary self, I felt very weak, as when upset by a very strong emotion, and found it very difficult to realize and to formulate what had happened. I got hold of it only by the impression that remained, a sort of *absolute assurance of the reality of the Divine*.

“It seems to me that to-day [the day after the experience] it is easy to endure life with fortitude because I have realized as never before that this life is not all, that it is but a part of the final reality.”

Three days later (March 5th), she added the following information. “How long did that experience last? Perhaps one minute, an hour, or longer. I came back to the world as one comes back from a swoon, but without any unpleasant feelings, except a cold sensation which came later on. As soon as my moral self began to reflect upon what had happened, I had the conviction that there had been an irruption in me *of the divine*. But, almost at the same time, I felt the *impossibility of formulating* that which had been communicated to me. An influx of spiritual life has certainly taken place, but not in the form of a new dogma or an intellectual conviction. It was a living contact, producing life.

“I need hardly say that, now, biblical expressions crowd upon my mind in order to express or explain that which I have experienced, because throughout my life every religious experience has taken a biblical form; but at the time—apart from the fact that I have very soon given the name *God* to what had surrounded me—I did not have the impression that it was one of the regular religious experiences. It was in any case much deeper, greater, more overpowering, and less precise than anything I have so far considered in my life as a religious experience. Especially, I played a much less definite

rolé, or rather I did not play any rôle at all, since I had the feeling of having completely disappeared, of *not existing*."

The Friend never reappeared, but in the course of the following two years this Experience reproduced itself thirty-one times and Mlle Vé had an opportunity of verifying her initial description and of indicating alterations or new features. This she did with a power of introspection equal to that of St. Theresa and a critical ability far beyond hers.

With every ecstasy she struggled anew for a definition of the "Divine." The most significant of her utterances on this point follow in chronological order:—

April 2d. "It is not easy to come closer to that Divine Experience which I have had the privilege of undergoing four or five times. In several respects it upsets my best established notions of the meaning of the Divine. It is more vague and especially less personal than that which I have so far regarded as the Divine. As I wrote yesterday, it really soars *beyond good and evil*."

April 16th. "It is only now that I realize how narrow, dogmatic, anthropomorphized my conception of the Divine was. I had elaborated a God residing altogether in the moral sanction, and revealed altogether in the Father set forth for us by the Christ of the Gospels. I have at times felt all conception of God not modeled upon Christ or leading back to him as blasphemous."

"The Divine of which this Experience gives me glimpses, surpasses in grandeur and in directness everything I have been able to imagine so far. It is a God who surrounds and envelops me, lifts me up, illuminates and purifies me. But it is also a God that destroys me: to enter into contact with me he requires the complete sacrifice of my self-consciousness. This, the impossibility of the Divine and of the human self to exist simultaneously, is something new to me. But, then, what is this Divine that I do not apprehend as a person, which engulfs my personality and afterwards communicates to it a living force?"

Whatever perplexing queries may arise, Mlle Vé continues to feel for a while after each Experience "the absolute conviction" of a Divine intervention. On the occasion of the Ninth Ecstasy, she remarks, "I felt most of all my weakness, my powerlessness, and the uselessness of any attempt at resistance; and also that curious impression of being surrounded by something at once violent and tender. I understood now that the mystics of the middle ages could compare

their ecstasies, altogether spiritual, to the enjoyment and the embraces of human love. Those are certainly the symbols (could I bring myself to use them) which best fit, not the Experience at the moment of contact, but the sensations that follow or precede it and that ultimate impression of the aim reached, of utter fulfillment."

On May 9th, on the occasion of the 10th Ecstasy, she asks: "What is it that makes connection with me in those instants 'in my body or out of my body, I do not know, God knows.' I have never had the impression that it was a manifestation of Christ: it is too impersonal, too elemental. And yet, afterwards, it has for my soul the value of a meeting with God and I feel vivified."

Visitation by an impersonal, elemental power, however entrancing and beneficial it may be, is not enough for her. On the 12th of May, after the 11th Ecstasy, she writes, "And, nevertheless, I need something else. I must find again the *personal* God, the God-Power-and-Light does not suffice me. I hardly dare write this—there is something almost sacriligious in asking for more than I have received, but I cannot do otherwise. Not even this contact can satisfy my soul, thirsting as it does after the living and loving God."

In one instance (the 12th Ecstasy, May 17th), it had seemed to her that she had felt a Power "more personal, less elemental." What was the source of that impression? The sequel gives the answer. "I had," she writes, "an impression of divine *sympathy*. Nevertheless, there persisted that sense of the infinite which surpasses our limits and our measures." But this is an exception; the conclusion of the matter for her is that a Power that manifests itself in overpowering personality instead of eliciting a personal response, is not a personal power, still less the God of Love.

* * * *

We may pass now to the second question, "Why does she experience an impersonal rather than a personal Power?" Let us recall first that she was already familiar with the imaginary presence of an ideal Friend with whom she had held heart-to-heart colloquies, and in whose companionship she found delightful comfort. She was quite clear-sighted about this Friend; she knew that it was a creation of her imagination urged by craving for companionship; she "saw the ropes." All of us know, in a general way at least, these psychological ropes; for, the Friend's presence belongs to a very common class of phenomena exemplified in the "make-believe" of children in play with absent companions, in the day-dreaming of adults who live

over again, in imagination, happy moments spent with friends now absent, and in the dreams of sleep in which our wishes come true. We all understand that the reasons why in those moments we "feel" as if the absent friend was present, are to be sought in commonplace normal activities of the mind. Mlle Vé was at the time struggling with a sex-passion that had besmirched a fair friendship. She wanted to free herself, to break with that man, and, in general, to escape from the obsession of sex, and, beyond that, she wanted with all the energy of a starved soul, a strong and wise friend whom she might altogether trust and love. In so far as the world of dreams may be regarded as the creation of desire, the apparition to Mlle Vé of a Friend, virile, yet making no appeal to the sex passion, is sufficiently explained.

On the night of the first Great Experience she had to make an especially vigorous and protracted effort of mental concentration before the Friend appeared. The account transcribed above indicates that she fell into a trance in which she was unable to move, although at first she remained conscious. Those familiar with hypnotism will recall that this is a condition characteristic of its lighter stage. The ordinarily present sensations of touch and pressure disappeared. This anaesthesia was in itself sufficient to produce the impression of being altered and of being "elsewhere," liberated from the weight of the body. The Friend came, but there was no conversation with him. Mental inertia was apparently already too deep. Suddenly, consciousness disappeared totally. When she returned to herself, she realized the total eclipse; she felt weak, confused, not knowing at first what had happened to her. In retrospect, nothing remained of the Experience but "a sort of absolute assurance of the reality of the Divine." On following days, as her "moral self" began to reflect, she endeavored to formulate her Experience. But, look back as hard and as often as she may, all she could say was, "An influx of spiritual life has certainly taken place," i. e., something "producing life."

That she had been the object of the manifestation of a great superhuman power was for her, limited as she was in knowledge of physiology and psychology, a natural, probably an unavoidable conclusion. When, independently of your will and even of your expectation, you find yourself, in rapid succession, the seat of unusual sensations, deprived of the use of your limbs, stripped as it were from your body, and finally deprived of the sense of existence itself, to be restored to normal consciousness a moment later, what thought seems more natural than that some Great Power, external to yourself, has

acted upon you? That she could not regard it as personal is, as we have seen, the very logical result of the absence in this seizure of the kind of attitude and response that is ordinarily elicited by the presence of a personal agent.

To this might be objected that the Christian mystics have no hesitancy in ascribing their complete trance to the action of a personal divinity. This difference in the causal explanation of an essentially similar experience is due to the quality of the moments immediately preceding the total loss of consciousness in the Christian mystic. As consciousness wanes, they feel themselves "in the divine embrace"—that is their own expression. It is therefore natural for them to regard their unconsciousness as absorption in God. In the case of Mlle Vé the seizure was introduced quite differently: the Friend, not God, was with her, and he vanished at the approach of the Power.

* * * *

We understand now why she interprets her Experience as the manifestation of a superhuman power, not personal. But why does she insist upon the divineness of that power? Had she been more familiar with certain diseases, with epilepsy for instance, with its aura of strange-feeling disturbances and of disturbed external perceptions, followed by a momentary loss of consciousness, she might have found it very difficult to speak of a divine power. But since, when reflecting upon her experience, no comparable phenomenon such as would offer itself to the mind of a psychiatrist occurs to her; and since, instead, "biblical expressions crowd" upon her mind "in order to express or explain" that which she had experienced, she had but one alternative: the Power was either divine or satanic.⁴ She chose the former. Why did she? Could she have had any reason for regarding herself as the object of the action of satanic powers? Nothing in the character of her trances favored that interpretation, unless it be their connection with the forbidden sex-passion. This connection, however, was not immediately realized by her. When it was realized, it suggested "the most radical doubt as to the nature of the Experience." On the other hand, the peculiarly strong need of help that she felt on that day, her habit of seeking assistance in prayer and divine communion, and her belief that divine powers might and, in certain cases, did manifest themselves in strange phenomena, (she was familiar with

⁴After all, I am probably stretching a point. She possessed perhaps sufficient knowledge to regard her Experience as including nothing else than her own nature.

the ecstasies of the Christian mystics), inclined her to regard her experience as the expression of a good, a divine power.

How strongly she was incited to make the best possible use of whatever happened to her, appears in the determination with which, even before she had become quite clear as to the nature of the Experience, she resolved that it "should have moral results." This compulsion to turn to moral account the puzzling doings of the Power was felt anew with each returning manifestation of it. This resolve was greatly strengthened by the conviction of the divinity of the Experience. Expectation, in things of the mind, creates the expected: she is strengthened, comforted; an "infusion of life" takes place just as if, in her opinion, a divine power had interfered. And this consequence of belief in divine action reacts on the belief itself so as to confirm it; thus, a circular action is established.

The entire beneficial effect of the trance should, however, not be regarded as arising from the belief in the divine nature of the Experience. The brain storm contributed to the outcome not only by the suggestion of a divine power, but also directly by the physiological changes it produced. If we are ignorant of most of what happens in the nervous system, we know in this case that an upheaval profound enough to bring about unconsciousness took place, and that, on awakening, the state of consciousness was materially altered, both with respect to the affective tone and the conative disposition. These physiological modifications are observed whether the brain storm be the culmination of intense moral struggles, as in conversion; or whether it be otherwise consciously prepared, as in certain mystical ecstasies; or whether, still, it takes place quite independently of psychical influences, as in epilepsy. Instances of epileptic aura illustrating this point are widely known.

Curious alterations of vision are frequently observed after or before brain storms of various kinds, notably in the epileptic aura and after the conversion crisis. Jonathan Edwards, the New England Divine, relates in the account of his conversion that afterwards "the appearance of everything was altered; there seemed to be, as it were, a calm, beautiful appearance of divine glory in almost everything." Similarly the Reverend Mr. Peck writes how, the morning after his conversion-crisis, when he walked out in the field to work, "the glory of God appeared in all His visible creation. I well remember we reaped oats, and how every straw and head of the oats seemed, as

it were, arrayed in a kind of rainbow glory,—or to glow, if I may so express it, in the Glory of God.”⁵

But there is no reason to expect that, in the main, nervous storms of purely physiological origin, i. e., uncorrelated with purposive strivings, will tend to the production of a more perfect personality. They may have any effect whatsoever. If, in certain instances, they bring joy and the triumph of altruistic impulses; in others, they induce sadness and reinforce egoistic tendencies. It is only when—I need not say “*because*”⁶ brain storms take place in connection with a realization of moral imperfection and a striving toward moral unification that dynamic readjustments conditioning the realization of the moral purpose may be expected.

There is, however, a group of minor physiological effects of brain storms that conduce to the establishment of peace of mind and unity of purpose. We have in mind effects similar to those of a hot bath, of an exciting game, of a dose of alcohol. We are too prone to forget these commonplace means of refreshment and change of mind when we seek an explanation of the mental transformation that follows upon certain brain storms. The altered mood and attitude toward the world of the unwilling drunkard, when the passion has been satisfied, shows points of fundamental agreement with the state of mind of Mlle Vé as she recovers consciousness.⁷

The facts just recited justify, it seems, the statement that, in brain storms, dynamic relations of nervous elements undergo more or less temporary readjustments, resulting not only in sensory disturbances, but also in more extensive alterations that are reflected in the affective tone and the conative attitude of the subject. They justify also the belief that, independently of whatever influence the subject's desires and efforts may exercise over the course of the physiological disturbance, some of the changes are beneficial and fit in with the ideal purpose of the subject.

* * * *

Mlle Vé did not fail to realize the great difficulty there is in conceiving of a power impersonal and yet divinely good. If, on the one

⁵From the section “Appearance of Newness” in my study of Conversion, *Amer. Jr. of Psychol.*, VII, 1896, page 353.

The terms “*illuminé*” and “*rayonnant*,” used by Mlle Vé may refer to visual impressions similar to the above. Usually, however, she uses words such as these, as other mystics do, in a figurative meaning.

⁶I do not mean to imply adherence to any metaphysical theory of the relation of mind and body.

⁷The interested reader will find a fuller discussion of the dynamics of the mystical ecstasy in a book on mysticism soon to be published.

hand, the Experience lacked certain traits which, it seemed should be present in the action of a personal being, on the other hand, the practical effect of the ecstasy seemed to her to point to a personal being as their cause. This train of thought came to a head in reflections following the 14th Ecstasy:

"In this divine contact, I gather strength, light, a sort of vivification of my moral being, all things which, it seems to me, can come only from a Personal Being. I do not see how these forces could come from a blind energy. Am I not justified in ascending from the work to the Workman?" She concludes that an 'act of faith' is legitimately required of her. "I believe, then, that I have the right not to stop at mere observation, but for the sake of my moral life, to add the conclusions of my unshakeable faith in a personal God."

We may observe in passing that this piece of reasoning is common today to all those—and among them are found many distinguished theologians—who base their religious faith upon "inner experience." They, as well as Mlle Vé, pass, as I have shown, from an influx of energy directed toward the realization of their ideal, to a personal God as its cause. This is a conception subject to scientific criticism.

Mlle Vé may have kept, as she seems to say, an "unshakeable faith" in a personal God; she did not keep an unshakeable faith in the manifestation of that God in her trances. The "work" produced in them did not always seem necessarily to point to a personal God as the "Workman." The last significant utterance she records on this point is the following, dated two months before the last Ecstasy (May 31st):

"I am disturbed by that which takes place in me at the time of the Experience. I think of it almost constantly and I see less and less clearly into it. This Experience, so frequently repeated, has remained for me inexplicable. Each time it possessed a living value for me. It is as real as any other inner experience, and each time it gives me the same impression of contact with a something outside of myself, yet within me, that reaches beyond me and envelops me. And now, when I think of it, I no longer find God, or at least not the God able to satisfy me, the God of Jesus Christ, and I almost come to the conclusion that I have allowed myself to be deceived by my imagination, that there is nothing in it outside of my own self." She had come to realize that it was all a question of the meaning she ascribed to

¹For a discussion of this point see Chapter XI of my *Psychological Study of Religion*, pp. 207-277.

various feelings and emotions, "I am compelled to observe," she wrote a little earlier, "that alone the meaning I give to it, instinctively and retrospectively, is religious and divine." And now doubt has come as to the correctness of that interpretation.

When these thoughts had once found lodgment in her mind, the Great Experience ceased. Possible reasons for its cessation have already been mentioned. From now on, communion with Christ, without entire loss of consciousness, but in a condition similar to the first degrees of the ascent of the soul to God in the scheme of the Great Christian Mystics, replaced the Experience as source of affective comfort and moral energy. The Great Experience proved a wonderful, but a disappointing venture: the Christian God was not in it; perhaps nothing but her over-tense and eccentric self was in it.

* * * *

Experiences like that of Mlle Vé continue to be regarded among religious mystics and certain philosophers as of transcendental significance. They are said to bring down from heaven a spiritual manna, a germ, if no more, of absolute truth, to be won in no other way. To speak in cryptic terms such as these is much easier than to convey that which is actually revealed. In the past, philosophers have committed the folly of ascribing to God the characteristics which describe what happens to the self when it becomes unconscious. Since an unconscious trance was regarded as a merging of the soul with the divinity, the description of that condition was, they thought, a description of the nature of the divine. The Neo Platonists, their German followers, Eckhart, Boehme, and others, have said in substance: "Of God nothing can be affirmed, neither being nor life; for He is above all definitions;" "God is neither this nor that; He is being without being;" "*Nichts werden ist Gott werden.*" The puerility of descriptions of God by mere negatives is now generally acknowledged; but the mystical experience continues to be regarded as, somehow, a revelation of the Beyond.

One of the curious points insisted upon by all mystics is the invulnerability of their experience, and, therefore, the right to absolute assurance in the truth of their revelations. But what is it that is incontrovertible? Here the unanimity breaks down. There are those who affirm the absolute certainty of "the truth of Berkeley's theory of existence" revealed in a trance, of the existence of a particular saint who has appeared in an ecstasy, or of Christ, or of God. William James, more critical and cautious, limits himself to abstract terms:

The mystical ecstasy, he declares, speaks of the supremacy of the ideal, of security, of repose, of union. Others, still more wary, admit merely that, in the trance, the bare existence of a Beyond is revealed. If, they say, anything more is to be known, reason must discover it.

Insistency upon the right of the mystic to regard his revelation as unassailable when nothing can be said about it, is, speaking mildly, unprofitable. When, however, invulnerability is affirmed of something intelligible and really free from interpretative additions, it turns out to be just as obvious and meaningless an affirmation as, "I feel cold," or, "I feel warm." The experience of cold and warmth is, as sensation or feeling, obviously invulnerable; but what of it?

What light does Mlle Vé throw upon this problem? After the first Experience, she affirmed an absolute certainty of the action within her of an external, divine, and impersonal Power. No one need deny that she was absolutely certain of these things at the time. But that is a fact of very little significance. More important are the serious doubts that arose in her, after fuller acquaintance with the Experience, concerning the divinity and even the externality of the Power. Must not these doubts be accepted as proof that her assurance referred not to a fact of "immediate" experience but to a construction placed upon the immediately given?

In the present instance the only unassailable, because immediate, "revelation" consisted in the following sequence of experiences:

1. Various feelings of cold, of quivering, etc.; i. e., disturbances of sensory and motor enervation, coming and going with considerable swiftness and violence.
2. A total and, usually, startlingly sudden loss of consciousness.
3. Various feelings similar to those characterizing the first phase, and a sense of fatigue or exhaustion.
4. Various emotions and ideas determined by the subject's present and past experiences, appearing throughout the conscious phases.
5. A change in the mood and moral attitude of the subject when compared with the pre-trance condition. This change seems to consist essentially in a disappearance of irritating tensions and of worrying impulses and cravings. Thus a greater degree of unification of the self is attained; and, correlated with it, a mood of greater optimism and energy.

That all these things happen to Mlle Vé is, of course, incontrovertible—so incontrovertible that she does not think of making that claim. It is with regard to the *meaning* she ascribes to these facts that

she makes a claim; namely, that they are manifestations of a power outside of herself and divine.

The derived, interpretative nature of this proposition is established, not so much by the fact that she recognizes it as such, but by the appearance in her mind of doubts as to its truth. She could not have doubted her feeling of cold, or her sense of fatigue, or her greater hopefulness; but she could doubt an interpretation of these facts.

WHAT DRIVES THE DREAM MECHANISM?

Some Questions Raised by the Inventorial Analysis of Dreams

BY LYDIARD H. HORTON

IT IS to be regretted that the attention bestowed upon the dream problem, and evidenced by a host of writers, has been so largely inspired by studies in the pathologic phases of sex-emotion as revealed through dream analysis. For this has tended to put off the day when dreams shall be studied in a truly scientific manner for the sake of their many-sided relationships to other questions, not merely psycho-medical in the current sense, but of deep import to certain backward branches of philosophy and of ethics.

On the side of social ethics we can learn that dreams, if sanely and conservatively interpreted, shed light on our moral judgments of ourselves and of our fellow men; and on the side of philosophy, it is obvious that the careful and unbiased observation of dreams must serve to bring to a sharper focus the discussion of the relation between mind and body.

The intellectual discipline acquired in dream study, through the scientific methods above alluded to, should not fail to be of great aid in resolving many of the problems attaching to the study of Man. A proper understanding of dream mechanisms in the spirit of true science, as divorced from mere speculation and from the love of the poetical and picturesque features that dreams sometimes bring forth, should even help to bring into fruition both the practical side of ethics and the unfortunately still impractical aspect of the philosophy of the soul. For it would seem that the dream, as a new unit of investigation, might serve both sciences and still, as it were, side-step the dry-rot that has so notoriously accumulated in both ethics and philosophy.

When considering the relation of the dream mechanisms to the total personality, or to the general stream of thought, one is reminded of Aristotle's dictum "that the nature of things is best known in their smallest parts." In this sense, the dream is a fragment of the person that serves to show how the total mosaic of the personality is put together. By studying dreams as stones in the edifice of thought we

can reach a perfectly clear idea of the process by which the larger constructions of behaviour and of covert or of overt motives are reared.

Our most covert thoughts, even before they reach consciousness, are apt to be bared in dream analysis, justifying to a surprising degree Aristotle's easy and ready assumption (in his essays on dreams) of the existence of trains of thought of which we are unaware. It seems as if only formal adherents of the school of John Locke, who denied the unconscious or subconscious processes, had any scientific excuse to remain in ignorance of what the dream has to offer in rebuttal of his historic denial. As to our overt thoughts, the ones that come to our mind in the battle of life, we can often test their utility and solidity by going into the workshop that prepares them, namely into the realm of our own dreams. There, as if one were visiting the smithy of an armorer, one can observe in process of assembly or of tempering for use, the very elements that are later to compose the effective apparatus of waking thought. Often, we can review our armament arranging itself in the dream when we are about to enter the lists of logical argument with some rival in our professional pursuit. More than once has it been my privilege to take a man through the armory of his own mind in this sense and show to him all the pieces-at-arms that are being made ready for his coming deeds. There one can see the craftsmanship of the soul, using ideas: some scattered about at loose ends, like bits of chain mail, others like plates of mail, overlapping neatly in series and (too obviously to be overlooked) destined to a particular purpose. Sometimes the revelation of purpose is so sharp, so unexpected to the individual visiting his own soul's workshop that he is aghast. The facts are so bald, so convicting that it quite breaks up the pleasant analogy of the armorer's shop, where all that is being forged and tempered acquires a certain worth and dignity, being fraught with a use so noble as the art of self-defense or of manly aggression. Often the dream shows also that we are more than prepared for ignoble deeds!

Yet, when one studies deeper than analogies can carry us, it is quite plain to be seen that the business of the mind consists to an overwhelming degree of processes pertaining directly to the necessary offense and defense in the struggle for existence. I am indeed far from agreeing that the element of phantasy and of idle embroidering of pleasant pictures upon the canopy of night plays so large a part as

Mrs. Foster has supposed in her excellent depiction of her own dream life.¹

No analogy can do justice to what one finds in dream study through scientific method, as distinguished from purely descriptive and discursive or anecdotal studies of dreams. And yet the importance of dream study fails as yet to impress itself upon the larger audience that it is especially suited to satisfy. I allude to those who are earnest seekers after new light in the field of Ethics and in the Mind-Body problem.

Section I: Why Dreams Are Not More Scientifically Studied

The slow progress being made in reaching a satisfactory explanation of dreams is due to a deficiency in the "drives" that move the interest of observers: (1) The dreamer himself is not always scientifically minded and is influenced by egocentric drives. (2) The drive of scientific curiosity falls short of the goal for lack of sufficiently laborious study of other people's dreams at first hand. (3) The reputed absurdity of dreams and the tediousness of dream narratives make serious investigation precarious.

There are a number of difficulties that must be overcome in passing from mere analogies to concrete presentations of the inner significance of the dream. For one thing, the average person, who may be tremendously interested in relating and in studying his own dream, acquires a large amount of apathy and disinterest when confronted with another person's dream. In the former case there is a distinct "drive" that leads to a feeling of zest in making out the significance of one's dream, the very circumstances of which create or constitute that "drive" (apart from mere egotism) whereas no equal drive impels one to work out the meaning in the other man's dream. In other words, the dream itself, as an object of study, fails to supply sufficient incentive to any but a specialized group. This is largely because (when the dream is not one's own) the seeming triviality of the interests agitated in the dream, and the general aspect of irrelevancy repel rather than attract.

It requires a special interest, not easily aroused, and a special situation to make a scientific study of dreams. The specimen cannot be examined at random, as one may examine architecture or hunt but-

¹Yet I must agree with Dr. Morton Prince, who has contributed an introduction to her work, that this element has its importance and is in need of being brought to our attention, lest we try to make our theories of dream impose too rigid formulas upon the "imaginings of them that sleep," as Thomas Hobbes phrases it.

See *Studies in Dreams* by Mrs. Mary Arnold Foster, published by Messrs. George Allen & Unwin, London, 1920. An American edition is in prospect.

terflies, or explore geological strata. There has to be a "sitting" with a person who has had a dream and is willing to co-operate in giving data about the fancy. It is only under these circumstances that one can come into sufficiently close touch with the realities of the matter to acquire an immediate personal comprehension of the phenomena of dreams, and of whatever psychic force it is that makes dreaming. This force reveals its direction, its intensity and its modes to the man who will sit down with one subject after another and discuss the bearings of the various association experiments that form the first analysis of the dream. First-hand knowledge is indispensable.

In time, after one's experience has become standardized, there is a sense that "history is repeating itself," that the incidents that arise in dream study, the mechanisms that reveal their characteristic form, are almost literally "too familiar for words." One gets into the attitude of utilizing the conception of dream mechanism in practice, not caring very much to explain it to the first comer, because there is always so much else to be done. In applying one's information and technique to practical tasks there is the satisfaction of unraveling one more dream and one more mental tangle. For, by this time, one sees that the other man's dream *is* interesting, and that his dream as an example of the adjustment of inner to outer relations (in Spencerian phrase) is a fascinating instance of the struggle for existence on its mental side.

Section II: The Demand for Unified Views of Personality

The psychoanalytic formulation of dream processes remains unsatisfactory because it over-simplifies the data of dynamic and social psychology and disregards the large part played by purely physiological and sensory factors in driving the dream, let alone wishes, desires and other motives.

The interest of the student of oniocritics now naturally shifts to the bigger questions underlying the dream—supposing, of course, that he is no longer obsessed in his intellectual workings by the fear that someone may catch him in the position of "overlooking the sexual symbolism." That is, when one has worked through an apprenticeship in dream-study, one begins to realize that the argument about *symbolism*, fixed or otherwise, is one that could be indefinitely prolonged, much to the comfort of our Freudian friends, without really accomplishing anything in the domain of a true psychology of human thought and motive. One has to look away from alleged entities like the Libido, the Censor, the "dream-work" of Distortion, and seek some less shifting (and I may say less shiftless,) concepts.

In sum, looking beyond the immediate, we seek the ultimate. More simply, one is like a child, who, having become satiated with the variety of views to be obtained by looking through the objective of the kaleidoscope, with its endless repetitions of new but always more or less understandable patterns, wishes now for the refreshment of comprehending the total mechanism.

This is but saying that the oniologist looks for the "dream drive," or major dispositions of forces, of which the particular images and fancies in dreams represent the by-products.

Does this not place us immediately in touch with the controversy now being waged over the very fundamentals of Dynamic Psychology, as recently expounded by Professor Woodworth and as a matter at issue between him and Professor McDougall.²

Of course, we have already at hand the highly simplified answer of a large and very vocal school, which teaches that the Libido is the Urge within the psychic Cosmos, that its elan vital is best considered as a form of the well and favorably known sexual impulse. This, no doubt, should make us feel that we are on familiar ground. It takes the sense of strangeness away from our unaccustomed exploration of the Beyond in mental action. But the trouble with the formulation of a Libido as the essence of all drives and sub-drives, is that the facts are largely forced and twisted and the true difficulties smoothed away, apparently for just that "sense of the familiar in the unfamiliar" which gives the touch of fascination to the theory of the Freudians. They say the sex motive is the dynamic force of the dream, making but few exceptions, and these only in favor of young children or of those who are moved by elemental infantile drives such as the food interest.

THE DISPUTATION OVER "DRIVES"

The objection to this sort of theory is now fully realized by those who are turning to social psychology. There the variety, the inter-relations and sometimes the contradictions among the so-called emotions and instincts furnish an immediate refutation of any theory that aims at too simplified a view of the "force" that drives the human animal. As a result, we have these discussions, of which that arising between Professors Woodworth and McDougall is an enlightening example, as to whether conative dispositions, the Endeavor of man, as Hobbes called it, can be explained on any unified basis at all. Profes-

²Fully cited on page 240.

sor Woodworth is a partisan of "many drives," many separate mechanisms capable of setting up drives of their own, while Professor McDougall, sees many conative interests but fixes his eye especially upon the common roots that gives solidarity to man's efforts at adjustment.

I confess that I got somewhat lost in following their argument because I am used to narrowing my own perspective when dealing with human motive, in order (so I excuse it) that I may better observe the phenomena in question. I have not reached the point of surveying the whole field; nor am I sure that anyone has. But I feel that when two eminent psychologists lock horns on this subject it points to an issue worth battling for in one field of the psychological range. The particular ground on which the contest is to be waged is not yet picked out. In fine, to meet in battle ardor on the question of whether human "drive" is particular or general, whether it belongs to scattered mechanisms or to a hierarchy of related mechanisms, mutually dependent, is not yet fighting for a foothold on any particular point; it is more in the nature of two champions feeling each other out. And very interesting it is, and profitable to the spectators.

Now I have said that dreams furnish the simplest cases for mind-study. Without prejudice, therefore, as to what may eventuate from the struggle I have adverted to, I would propose to consider definite examples of the question of "what drives the dream."

Section III: The Bizarre Compounding of Drives in Dreaming

Many specific cases of seemingly absurd dream imagery can be explained as the concurrent effects or confluence of separate drives. Among dream-drives one is logically compelled to include ordinary sensory cues. They should be distinguished and classified as external drives. These are apt to require—in the case of dreams—a process of "resolution" as complex as that demanded by the other sort of motive power or motives, namely the drives that seem to originate internally to the nervous system. In the elaboration of any given dream, Nature fails to recognize any such boundaries: for external and internal drives alike pursue their career toward resolution, commingling their effects in the phantasmagoria, without distinction. This is not what we should expect in waking thought, and that is what makes dream-fancy so often enigmatic.

The Desire for Manipulation is one that is coming to be regarded as one of the more fundamental drives that pervade the life of an individual. Its recognition in education, and the embodiment of its rationale in social psychology, promise to give us quite new chapters in the adjustment of human relations. The individual that James described thirty years ago as a stranger in his own world, may come in

for a deeper consideration—from a preventive and therapeutic standpoint—when we realize that this “instinct” is entitled to high rank among human motives and that it is a striving for a satisfaction *sui generis*.

It happens that the first dream that I published, namely the Snake Dream of a little girl, proved to be distinctly related to the idea of manipulating successfully a combination of tools necessary to draw water from a certain well on the farm.

Certainly, the tendency that set up the action or “mentation” of the dream was psychic. The dream was not set up by a physical sensation or stimulus of a somatic nature, nor with respect merely to perceiving a situation passively.

The trial and error process (mostly the error) was present in the sense that adjustment of mental forces fell short of what proved to be the concrete aim attributable to the waking self. The child did not dream of herself manipulating the tools, but of her *father* as the personage in the dream who was successfully handling and despatching *snakes* that had *bucket handles* in their heads. The performance of drawing water at the well was thus vicariously represented in two ways: substitution of snakes for the bucket, and substitution of father for self.

MECHANISM OF THE DEFLECTION OF IMPULSE

Such substitutions also must be explained: for error, or failure of exact aim, is itself a dynamic fact; and “trial-and-error” is only a term to conjure with unless we describe particularly how the error is brought about.

The “error” of the child in substituting the father image for herself may be explained: her wish to draw water in person was not the only drive. There was other work going forward besides the bare striving for manipulation. There was an impulse to assert competency, under the principle that McDougall calls “self-assertion.” There was correspondingly, an idea, desire or interest (operated by the impulse that we know so well in children) toward *impersonation* of a more advanced elder person. Far be it from me to attempt to classify this tendency, in or out of the category of “instincts.” We recognize this drive more readily than we can pigeonhole it. We see that it gave a new *slant* to the drive for manipulation *per se*. It constituted the concurrent and disturbing “other drive” that modified the straight tendency toward manipulation in fancy. Or, to coin a word

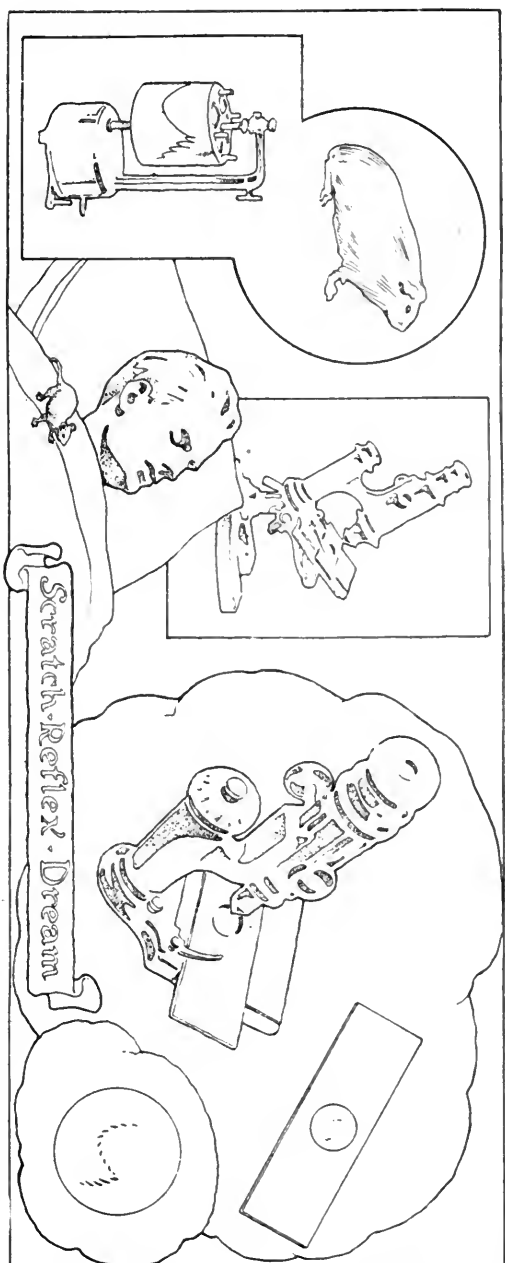


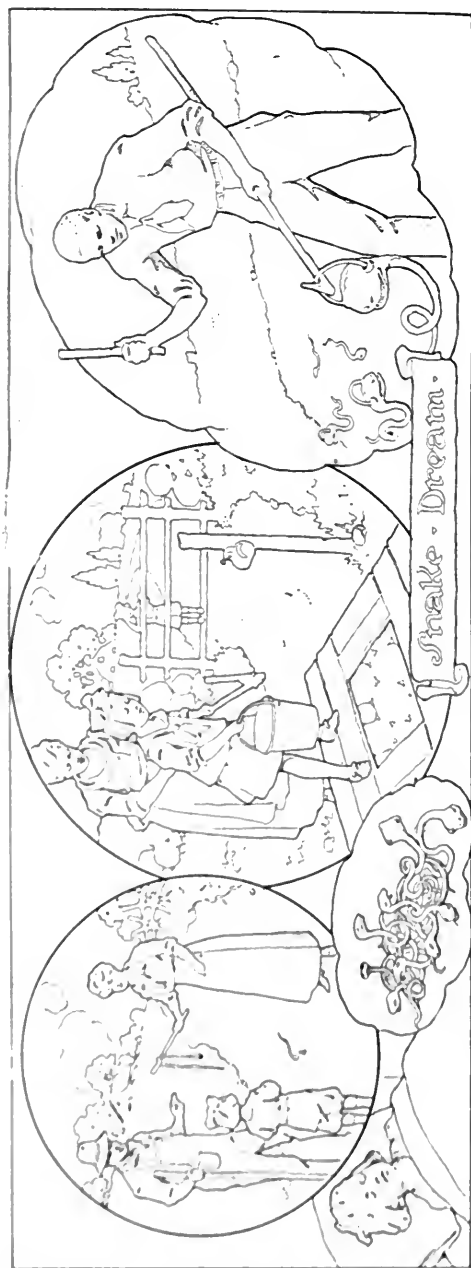
ILLUSTRATION SHOWING DIFFERENCE BETWEEN PERCEPTION AND APPERCEPTION IN SLEEP.

The dream is initiated by scratching sensations on the dreamer's ear produced by a mouse which was emerging from the bed clothes. The memories that were still semi-active in the dreamer's mind are indicated within circles and squares, while the cloudy outlines represent the three successive mental pictures that resulted.

The striking thing about this dream is that the least relevant image appears first, followed by a second which approximates to a perception of reality while the third

is a scientifically concrete representation of the scratching movement of a small mammal. In the dream it forms a visual picture analogous to the tracings of the scratch reflex on the smoke-drum of the laboratory kymograph.

This dream suggested to the writer in 1912 a solution for the apparent time inversion. The next dream (Door Slam Dream) is intended to illustrate this mechanism with more exactitude.



INVENTORIAL RECONSTITUTION OF THE TRAIN OF THOUGHT

The dreamer had gone to sleep under the influence of two sorts of past events: Pictured in the circles above. The one was the actual experience with a dead snake which led to some discussion of the distinction between *dangerous* and *non-dangerous* snakes, presented as hinging on whether the heads of the snakes were *square* or *round*. The distinction was taken in by the child with a literalness, almost geometric. This furnished the particular *snake* images and represented *degrees of danger*. The emotional element and the motive for action in the child's dream was supplied by the pent-up desire to draw water at the well, in emulation of her older sister, under the tutelage of the maid. The evening before she had been literally debarred from this task (as she is shown in the picture, weeping at the gate). Also on many occasions before she had been forbidden to go near the head of the well because of its doubly dangerous character: (a) the

rotting boards that were so laid over the stone around the well that they could trip up the child in her play; and (b) the round head of the well itself into which she might fall. Recently, however, this situation had been improved by building a safe well-top almost flush with the ground, consisting of new timbers laid together in a *square* with an opening to pass the bucket. This new situation is the minor danger and is represented by the square snakes. The well was "not so dangerous" now. The bucket, however, had still to be passed through the opening which was large enough for the child to fall through. *Handling the bucket* then was represented by the dangerous variety of round-headed snakes. And the analogy is completed by the fact that these snakes had little handles on their heads and that father manipulated them with sticks. These features of the explanation were fully validated at the time (see *Journ. of Abn. Psychology*, March, 1914).

I shall need, it provided the "deflex" that conditioned the normal response. Hence, in her dream, the child does not carry out in *propria persona* the pent-up desire to draw water at the well. The other desire had cut in, leading to imagery that—to describe it in popular parlance—"killed two birds with one stone." Thus did the reconciliation of the two existing tendencies take the form of a dream selection (oniric election) of father's image to "stand for" the dreamer in the guise of a *competent person*.³

Through case after case where similar shifts are seen in dreams we learn that "trial-and-error" simply indicates the inaccuracy of aim, prevailing in the operation of a drive towards its goal. It is due to a diversion created by "other drive." At the same time these "errors" can frequently be mapped out in the simple terms of stimulus and reaction, at the physiological level of explanation, and with the advantage of refining the principle of the "deflex," which I have tried to set forth. This tends to bring the "irrelevancy of dreams" within the purview of conceptions like that of the conditioned reflex as in the work of Pavlov and in v. Bechterev's "Reflexology." Irrelevancy means only here that the dreamer seems to fail in "hitting the nail on the head" when his performance of perception or apperception is judged by applying the standard of waking thought or discourse. The superiority of the waking mind in reaching its aim can be explained as a lessened liability to the "deflex," since the waking or alert or "vigilant" mind is—almost by definition—a mental apparatus in such a state of acquired momentum that minor deflecting forces do not great-

*It is to be noted throughout these explanations that they presuppose *limits* to the number of influences from the sensorium and memory. Though open to all winds, the dream is not necessarily in fact receiving gusts from every quarter of the mental compass. The way the "wind" actually blows is a matter to be ascertained by studying the tell-tale "straws." Freudians seem to have been thrown off their reckoning by failure to grasp the distinction between a sub-active or subconscious reminiscence and the purely passive state of potential but non-aroused memory. They lump the two as "latent content," going beyond the reasonable views set forth in Sir William Hamilton's teaching on "latent ideas" and overlooking Aristotle's ever important distinction between Memory and Reminiscence. Instead, they achieve a confused discrimination between *manifest content* and *latent content*, whereby (in actual practice) they are enabled to throw aside the evidential items in the former and to concentrate the interpretative skill upon the latter—that latent content which is often wholly in the mind of the interpreter and not at all to be found among the determinants of the dream.

It is unfortunate that the theories of both Bergson and Freud have for twenty years lent themselves to the loose hypothesis that apperception in dreams is achieved by an act involving the entire memory. On the contrary, experience with dream analysis teaches that outside of a more or less circumscribed field of activated memories, the act of reminiscence in dreaming (redintegration) is largely independent of the real "unconscious mind" which consists of inactive neurograms. (See Morton Prince's "The Unconscious" pages 149, 248-254, and especially middle of page 255).

ly alter its smooth course. Like a ship that has headway, it also has better steerage-way. The converse of this formula, as applying to the dreamer's mind, could be expounded in countless ways, for which I need not take time now.

The essential principle, as yet little utilized by psychologists, is that the dreaming mind is responsive to altogether too many influences, whereby it tends to compose into some sort of unity all the perceptions and apperceptions that are aroused in it from any source.

From this standpoint we can explain away the apparent "symbolism" of the combination between *snake* and *bucket* imagery.

THE COMPOUNDING OF STIMULUS-IDEAS

The "selection" (*oniric election*, as we might say) of the snake image to "represent" the bucket at the well would constitute for Freudians a good example of the "dream-work of condensation." It is, however, a mechanism peculiarly well known to those children who have been, in more than one generation, brought up on the tale of Alice in Wonderland. For the author gave them examples galore of what he called "portmanteau words," signifying two meanings packed into one word. The term had found its way into common English speech and was on its career toward the Dictionary, before "condensation" in the Freudian sense was heard of. Lewis Carroll himself, giving to the matter his characteristic mathematician's touch, expounded quite unmistakably the principle of resolution or reconciliation of mental tendencies, in his preface to "the Hunting of the Snark." Like many of his writings, it is ludicrous, but none the less strictly scientific in import.

Let us scan this bit of psychological horse-play, and try to realize how fundamental is the principle embodied in the examples offered by Lewis Carroll. His illustrations should give the final touch to our conception of the *rationale* at work in the little girl's dreaming mind when she created an "absurd" picture of snakes with bucket-handles attached to their heads.

LEWIS CARROLL ON "PORTMANTEAU WORDS" IN A. D. 1876

Humpty Dumpty's theory of two meanings packed into one word, like a portmanteau, seems to me the right explanation for all [the hard words in the poem of the Jabberwock.]

For instance, take the two words "fuming" and "furious." Make up your mind that you would say both words, but leave it unsettled which you will say first. Now open your mouth and speak. If your thoughts incline ever so little

towards "fuming," you will say "fuming-furious," if they turn, by even a hair's breadth, towards "furious," you will say "furious-fuming"; but if you have that rarest of gifts, a perfectly balanced mind, you will say "frumious."

Supposing that, when Pistol uttered the well-known words

Under which king, Bezonian? Speak or die!

Justice Shallow had felt certain that it was either William or Richard, but had not been able to settle which, so that he could not possibly say either name before the other, can it be doubted, that rather than die, he would have gasped out "Rilchiam!"

A. D. 1876—Preface to the *Hunting of the Snark*.

HOW DREAM ITEMS ACQUIRE THEIR ATTRIBUTES

Similarly, in the Snake Dream of the little girl, we detect a two-in-one vicarious representation of known objects of thought. Confining ourselves to the loop-headed snakes, we can follow out the process by which the bizarre imagery was brought into being. It represented, i. e. corresponded to, a reconciliation of two or more drives centering upon the manipulation of the bucket as the ultimate goal. The analysis brought out most clearly that the child had attached to this operation all the connotations of danger. And these in turn had, in the abstract, become focused around the idea of *snakes*. Further, showing how one can narrow down to realities, we found that the child and her playmates had gone so far as to apply the word "snaky" to any dangerous thing, and particularly to slippery and otherwise perilous rocks near the farm, at the edge of the sea. This modicum of "symbolism," if such it is, was therefore already on hand—*tout trouvé* as the French say—and does not imply special symbolizing tendencies as mystic attributes of the dreaming mind. This simple associative trend or drive was what inhibited the representation of the *bucket* as a simple cylindrical object, earmarked only by the usual and necessary loop-handle. It became, through the process of "deflection" of stimulus and resolution of combined tendencies, a *snake* with the unmistakable attribute of the *bucket*. Conversely, it was a bucket-handle with the unmistakable attribute of the snakes, namely danger.

The same explanation, *mutatis mutandis*, applies to the "errors" in the representation of self as *father*, and of the well itself as the *square-headed snakes*. Thus, what we might at first call a simple manipulation dream involving crude conceptions in the course of childish imagination, turns out to be a highly definite reconciliation of three or four drives, meeting in a considerable emotional conflict, and forming a set of "mixed motives."

If this sort of complexity is to be found in elemental dreams of

the wish-fulfillment type of childhood, how shall we expect to find simple solutions awaiting us when we come to the more complex types of mentation, which Professor Woodworth and Professor McDougall concern themselves withal?

In the meantime, while we may await with interest further exchange of views between these two psychologists, is it not well to study simple examples of "drive" in dreams, as the surest means of laying hold of something definite that will help us to build a picture of what the conflict of opinion is about?

THE COMMON DENOMINATOR OF ALL DREAM DRIVES

What I wish to put forward as the principle of all dream drives is not any one thing that can be classified under the head of an instinct, a wish, a stimulus from external or internal sources or any form of transmuted mystic energy but simply the sum or rather the dynamic resultant of a considerable variety of forces impinging upon the nerve channels at the moment. The process of dreaming is essentially the finding of the resultant of these forces and the projection into consciousness of the images that are experientially coupled with particular nerve-patterns mobilized in this "resolution."

SENSORY STIMULI VIEWED AS EXTERNAL DRIVES

One of the simplest approaches to the problem of how the nervous system behaves—and we know this means how it conducts stimuli—is to try to conceive of the mechanism of perception. To observe that mechanism as a thing responding to a stimulus is, after all is said and done, certainly equivalent to watching a drive at work in the simplest phase of motive power to which the term can be applied. We shall have to observe some of the incongruous products of the reconciliation of tendencies arising from unrelated sources of excitation.

In the Scratch Reflex Dream (March, 1916) I illustrated the erroneous and fanciful apperception or perception of a scratching sensation on the dreamer's ear. I showed how the normal course of perceptive impulses had been deflected into irrelevant channels, left more open or permeable owing to a conversation of the night before. In this way I defined the conception of "approximations" to the exact recognition of the stimulus. By implication, I foreshadowed the present statement regarding the "deflex" which is the active factor in leading perception astray. Yet in this earlier example I did not attempt to show exactly the mechanism of conduction whereby the "deflec-

tion" and the irrelevancy to the stimulus are produced. It was sufficiently indicated that the concept of "mental reactions" in perception was germane to the explanation of dreams. I cited the standardized conceptions of Ladd and Woodworth's *Physiological Psychology* as showing the way to deeper analysis of the why and wherefore of false perception in sleep.⁴

TIME RELATIONS BETWEEN SENSORY-DRIVE AND DEFLEX-DRIVE

In the hypothetical case of the Door Slam Dream, based on Dr. John Abercrombie's famous example, I showed by a diagram how the deflection from the true course of recognizing the stimulus would, as a question of time relations, result in letting the wrong idea get ahead of the right idea of the stimulus. The explanation at this stage was put on the basis of the neural phenomenon of "facilitation." I showed that the stimulus sent out from the auditory area (in the case of the Door Slam) would affect memory centers beyond the immediate realm of the correct perception. In the remoter tissues the reactivity would have been previously "facilitated," and would thus detonate ahead of the true perceptual center which might nevertheless have begun immediately to elaborate its normal and characteristic response, by fulminations in the correct nerve centers. The apparent inversion of time is thus simply due to the shorter period that it takes to evoke a wrong response (when this is the reader of the two) as compared with the normally longer time that it takes for the nervous system to find the strictly relevant response.⁵

⁴Ladd and Woodworth have in simple fashion stated the case of trial percepts, although it will be necessary to analyze the matter further for our purposes:—

PERCEPTION AS A FORM OF REACTION

In cases of difficult perception, however, it is often possible to observe the gradual development of a percept. A sudden and startling stimulus may call out an immediate motor response, attended by mental confusion, which then gradually gives way to a clear perception of the nature of the stimulus or of the object indicated by it. At other times, an unfamiliar stimulus, especially a curious sound, may give rise to a rapid succession of "trial percepts" which are promptly rejected, each for the next, till one is reached which satisfies the mind. A few seconds may see the whole series of tentative interpretations gone through with, and a satisfactory percept reached. In such cases, perception has definitely the character of response by "trial and error;" varied reactions, provided by instinct and previous training, are tried in succession, till one is reached which gives satisfaction. On the other hand, the perception of a familiar object has the character of a well-learned reaction which is recalled swiftly and automatically by the stimulus.

—Ladd & Woodworth, page 594, Chapter IX.

⁵It may be of help to suggest here that our use of metaphor and figures of speech in ordinary conversation arise very naturally from the experience that we get through accidental departures from relevancy. Such lapses as Spoonerisms, however, exhibit not so much the picturesqueness and resourcefulness of free-play in language, as they do the rigid and often distressing consequences of time-inversion due to differences in "finding-time" as explained; *e. g.* "Excuse me, sir, I think you are occupewing my pie; if you will come with me I will sew you to a sheet."

It is necessary to extend similar concepts to cover those alternative cases where the "deflex" or disturbance put upon the elaboration of the normal perceptive reaction partakes of the nature of "reinforcement." For this phenomenon too, I was able to supply a diagram that adequately depicted the confluence of stimuli in the canalizations of the nervous system.

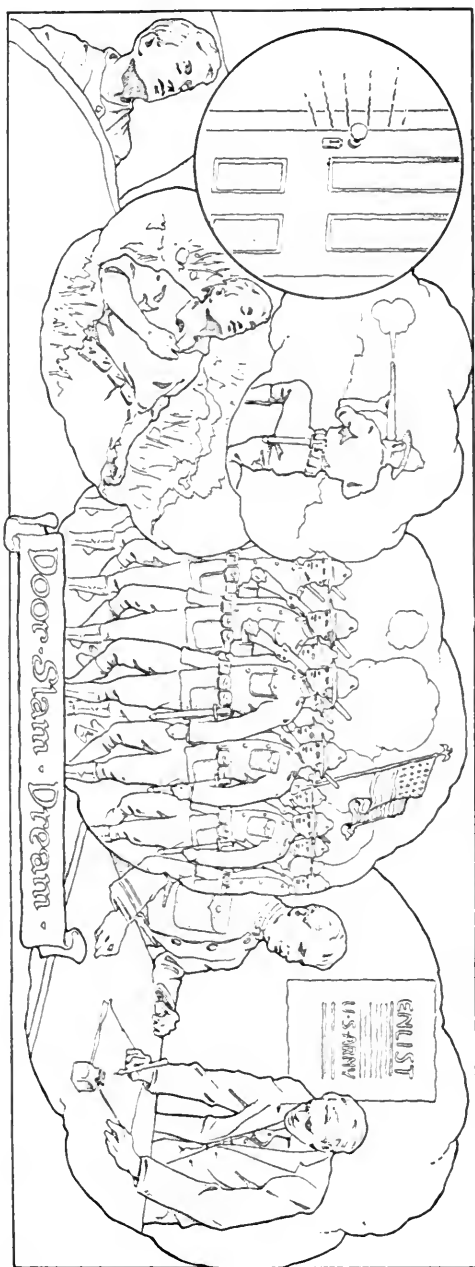
DEFLECTING EFFECT OF FACILITATIONS AND REINFORCEMENTS

Neither of these diagrams could be used to do full justice to complex internal drives. Still, we may read into the diagram submitted with the Door Slam Dream a suggestion about the relation of "facilitation" to internal drives. For the physiology of facilitation itself, especially when coupled with the fact that systems of ideas appear to continue self-facilitated over periods of years, leads directly to the concept of a more or less autonomous, self-acting reservoir of nervous dispositions.

A hint of how massively so-called "facilitations" may act is contained in the story of the Scratch Reflex Dream. In this case the "deflex" was an apperception-mass related to microscopy and reflexology (conversation with Dr. X.) which "detonated" at the scratch of a mouse's paw. The conversation about scratch reflexes was itself the product of many drives, but for the purpose of dream analysis it needed only to be considered as a single source of drive. Thus, exact localizing of the source of drives should prove a great simplification; and it is worth noting that it is more frequently attainable through the Reconstitutive Method than through the less circumspect methods of Freud and of Jung, known as the Reductive and Constructive Methods, respectively.

Section IV: Dynamic View of Nervous System Clarifies Dream Drives

If we take our first steps in dynamic psychology on the concrete basis of studying simple drives in the dream, we shall inevitably realize that a dynamic concept of the neural machine is essential to progress toward disentangling the mixed motives encountered in social psychology. Whether we deal with the emotions or the intellectual processes underlying the formation of sentiments in normal life and of "complexes" in the sense of abnormal psychology, we shall be forced to acknowledge the immense contribution of mechanical and certainly physiological elements to the sum of adjustments that determines behavior. This takes us back to a consideration of older conceptions too long neglected; notably, we turn to the formulation of the "automatic self," originally described (if not specifically so named) by René DesCartes, and amplified by Huxley.



MECHANISM OF TIME INVERSION ILLUSTRATED

This is a modern picturization of Dr. Abercrombie's illustration, which caused him to raise the question of *time inversion* (Dr. John Abercrombie, 1830). To obtain the proper succession of events as they appeared in the dream the scenes should be followed, from right to left, ending with door slam which, in reality, awakened the dreamer. On the other hand, the succession from left to right represents the order in which the actual mental images were subconsciously aroused. It is well to bear in mind that all these dreams (like the one pictured above) are capable of a more refined analysis than is customarily given. This analysis as will be seen from further examples, tends

to displace eventually the interpretations that are based on more far-fetched symbols. The reconstitutive method should enable one to "fetch back" only those memories that have been fetched far by the dreamer's mind. Cases like Dr. Abercrombie's are by no means rare. The mechanism of time inversion figures prominently in everyday life; not only in the amusing lapses of speech which are known as Spoonerisms (after an English dean of that name) but also in errors of the typewriter and of the linotyper. The daily newspapers bear ample evidence of the latter; they depend, like the rest, on the permatrice action of the nerve path owing to its being "facilitated."

The task of the oniologist should be to fill the gap that still separates our understanding of the dreams (as here illustrated) from a parallel understanding of the more complex waking drives. In the meantime, it is relevant to read a portion of Professor McDougall's presentation of the problem of waking drives, in which he contends for a certain degree of unity in motivation, which Professor Woodworth had been at some pains to impugn in his own "Dynamic Psychology."⁶

Let me deal first with the acquired capacities. In my *Social Psychology* I wrote, "Are, then, these instinctive impulses the only motive powers of the human mind to thought and action?" I answered this question as follows: "In the developed human mind there are springs of action of another class, namely, acquired habits of thought and action. An acquired mode of activity becomes by repetition habitual, and the more frequently it is repeated, the more powerful becomes the habit as a course of impulse of motive power. Few habits can equal in this respect the principal instincts; and habits are in a sense derived from, and secondary to, instincts. . . . Habits are formed only in the service of the instincts" (p. 43). I thus admitted and stated the case which Prof. Woodworth has made his own, so far as acquired habits are concerned. But Woodworth's extension of the principle to all special capacities, both native and acquired, has led me to re-examine the problem of 'drives' in connection with motor habits, about which I had long felt some uneasiness. It may be that I am the victim of contra-suggestibility; for this re-examination leads me to doubt whether even motor habits of the most pronounced kind contain any intrinsic 'drive.' The most deeply rooted motor habit that I can discover in myself is perhaps the repetition of the alphabet with a particular rhythm which I learnt as a young child. Now, if I launch myself on the repetition of the alphabet and if I check myself in mid-career, I do experience a sense of dissatisfaction and incompleteness, a vague unsatisfied tendency to complete the process, which might be taken as evidence of the intrinsic drive of this habit. But I submit that it can be otherwise explained. First, the rhythm has a certain form or scheme which is vaguely present to my consciousness as a whole when I set out to repeat the alphabet, and the failure explicitly to fill out, to realize, this scheme leaves a sense of incompleteness. *But this again depends upon the original purpose of repeating the whole alphabet.*⁷ It has frequently happened to me that I found myself uncertain of the order of sequence of some letters of the alphabet, more especially of the letters I, J, K, L, as, for example, in using a dictionary. My practice on such occasions is to repeat the alphabet from the beginning with the habitual rhythm, until I come to the required letter. When I have reached this

⁶R. S. Woodworth, Ph.D., *Dynamic Psychology*, Columbia University Press, 1918. W. McDougall, F. R. S., *Motives in the Light of Recent Discussion*, Mind; vol. xxix, new series, No. 115, paper read March, 1920.

⁷Italics mine; for emphasis of what seems to fit in with the idea of a "set-of-the-mind" limiting the career of the drive; as stated by me on page following.

letter, my purpose is attained, and I experience no tendency to run on further, no sense of incompleteness or dissatisfaction. That is to say, this very old and well-established motor habit seems to have no intrinsic 'drive,' but seems to depend for its 'drive' wholly upon the purpose of the moment, a drive entirely extrinsic to itself.

I arrive at the same result when I examine my performance of any other habitual action. And I challenge Prof. Woodworth and all of you to examine your motor facilities critically from the point of view of this question. I think you will be led to share my conclusion that the motor habit contains no intrinsic drive; it determines *how* we shall execute our purposes, but does not prompt and sustain the doing.

SELF-LIMITING OR FINAL CAUSES IN THE DREAM

Now I may safely leave Professor Woodworth and Professor McDougall to fight out their seeming differences in the field of the waking mental operations. I have neither the courage nor the insight to adventure into this broader terrain, now. But I do find myself somewhat at home when it comes to the dream.

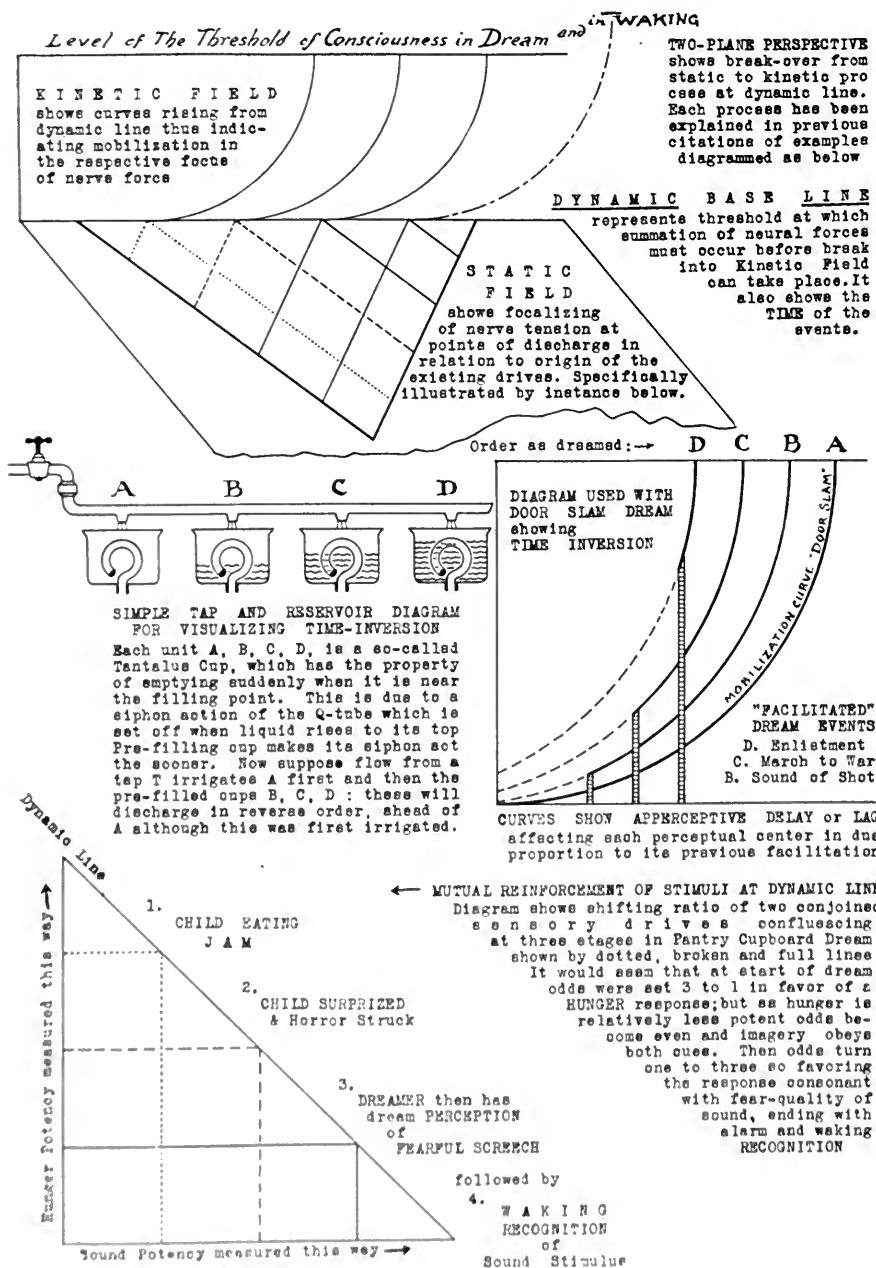
It seems to me that in his last paragraph Professor McDougall has put his finger upon the very point that I am personally so anxious to develop concerning the dream as a resolution of physiological states. Following this principle we shall perhaps understand why a drive puts a mechanism through its paces and then "lets up."

Now Professor McDougall cites *the intention* as a factor in reaching the point where there is no further drive. Something quantitates the drive at the start.

This is akin to my view that in every dream there is a similar set that mitigates the drive and leads it to let up. This is the fact that explains why we so often rest satisfied by "absurd" completions of a train of thought and why, in the dream, we so obviously often fall short of completing the idea as waking standards would require.

The original set (when identified) proves to have shaped the dream, much as the "set" or an ellipsograph prescribes the oval's curve.

It is my contention that there is some automatic adjustment made at the start of a drive that sets the point of expiration of the tendency. Until that set point is reached in the distribution of nervous energy, the flow is moved by a *vis a tergo*. This tendency or rather the mutually deflecting interplay of several tendencies, constitutes the "power behind the dream." Each individual component drive may be regarded as set for a certain trajectory, oriented to a certain direction (or path in the nervous system) but also limited according to its original



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GRAPHIC REPRESENTATION OF DREAMS

set so that it does not go on indefinitely. Reconciliation of tendencies is perpetually the goal. This confers the aspect of unity in dreams.

We need to conceive in mechanistic terms what Aristotle vaguely assumed as an "entelechy," meaning that which works out its self-contained trend "in the line of the goal." To visualize such a mechanism in neural or even in psychologic terms is to give a complete answer to the question, "What drives the dream?"

Section V: The Canalization Concept of the Nervous System

The DesCartes-Huxley-Claparède archetype of the human nervous system represents a mechanistic conception to which psychophysiologists are gradually reconciling themselves. It is being generally admitted that the only way to conceive of the nervous system is in terms of canalization; but the emphasis of the "Behaviorist" school upon the word reflex and the promises held out by Pavlov's demonstrations of the "conditioned reflex" have diverted attention from the still serviceable term canalization, and its rich implications. While it is the function of "reflexology" to demonstrate experimentally the integrative and hierarchic aspects of the nerve paths, it would be a mistake on the part of psychologists to abandon all hope of finding their way through the labyrinth of mental reactions by methods peculiarly their own. The psychoanalytic school having chosen to escape from their dilemma by flying into the face of facts on wings of anthropological fancy (as insecurely as Icarus of old) it remains for the psychologists to find some guiding "thread of Ariadne." This desideratum, we submit, is furnished by the "tap and reservoir" analogy recently revived in psychology. It corresponds to the scheme of external and internal drives, and is useful in refining the concept of canalizations. By holding to this thread of thought we shall not get lost in studying dreams, and we shall the sooner make an end of the mystery to which we have too long paid tribute.

The reason that we do not visualize the dream mechanism any better is that we are still floundering in a sea of imperfect analogies, and that we have never worked out the nervous system as a mechanism, as a tool of the soul, so that we can teach its known properties as simply as the telephone company explains the new automatic "call" system. It may be beyond my power to escape from analogies, and certainly, I shall not in one paper make the operation of the nervous system in dreaming as easy to comprehend as the operations of the new automatic switchboard. But certainly, having pretended to visualize for my own use the processes of dream activity, I should prove myself very dull if I could not come near to explaining the dream as the mechanistic tool of the spiritual soul.

THE NERVE SYSTEM A MACHINE FOR RECONCILING DRIVES

My object is to set forth the requirements of a neural mechanism that will give effect to drives with a self-limiting extent and at the same

time mediate that reconciliation of neural tendencies which is the essential task of the mind in the relaxation of sleep.

When it comes to the problem of conceiving how nervous impulses are routed in the nervous system to form drives, some means of cutting the Gordian Knot of our ineptitude must be found. For I dare to think that there is no need of foregoing to-day the satisfaction of treating of drives somewhat trenchantly, as a means of setting free one's scientific imagination. We turn therefore to the conceptions of a well-known biological psychologist.

It is Claparède, of Geneva, who states the essential nature of mechanistic reactions to the stimulus, as we must perforce visualize them in order to prepare our understanding to comprehend the inter-relations of external and internal drives. The following is taken from his "Experimental Pedagogy:"⁸

CLAPARÈDE ON THE TAP AND RESERVOIR ANALOGY FOR MIND

How is the organism going to make its choice, its selection of the most suitable reaction?

Old-fashioned psychology settled the difficulty by placing in the individual an entity (Soul, Ego, Will, Apperception) which had just this "faculty" of choice, decision. But that does not solve the problem it simply avoids it by substituting a word for an explanation.

In order to explain this process of choice, we must not attribute the power to one special faculty, but we must show how choice results from the given circumstances at the moment when the decision occurs. These circumstances are in the main the following: there is a need to be satisfied, and an object (perceived or represented) capable of satisfying it. These circumstances concur in giving rise to the reaction adapted to its satisfaction.

Suitable choice ("choix adapté" i. e. decision that harmonises with the well-being of the organism) is a process of reflex-action type. It is not some mysterious power that chooses, but it is the want and the object combined which together effect the selection of the reaction most appropriate to the organism. One can conceive how this process of choice is carried out in a purely mechanical fashion: We all know "the penny in the slot" automatic distributors of chocolate, which are so constructed that they bring out a tablet of chocolate when they contain one, and return the coin when they are empty. Our organism is similar to this apparatus, with this difference, that instead of having been made all at once, its interior works have been fashioned little by little by the experience of preceding generations, by heredity and by selection.

Let us now try to picture to ourselves how this physiological mechanism

⁸Dr. Ed. Claparède, *Experimental Pedagogy and Psychology of the Child*, Trans. Lough & Holman; London, Edward Arnold, 1913.

can be worked, by virtue of which only those stimuli which correspond only to the interest of the moment are permitted to set up a reaction, while those stimuli which awaken no interest remain a dead letter for the organism.

Let us suppose that there is in the organism a large reservoir of energy, the function of which is to irrigate with energy and to bring into play useful reactions. This reservoir is furnished with a number of taps, each of which controls the irrigating pipe of a special reaction, so that when one of these taps is open the energising force carried through the pipe will start the reaction which depends on the opening of this particular tap. Each tap is provided with a lock and the key is the stimulus or exciting cause. In a viable organism it is evident that the tap would not be capable of being opened unless the reaction it controlled were of use to the organism. To ensure this, the opening of each tap would depend not only on the stimulus but also on the need of the moment. These double dependences would be realized if the lock of each tap were provided with a keyhole which varied in shape according to the wants of the organism, so that each tap could only be turned by a key which fitted the keyhole that is, by the stimulus corresponding to the need of the moment.

By this arrangement a key (a stimulus) would only be able to turn on the tap of a certain reaction if the turning on of the tap by this key were good for the organism—and consequently the dynamogenization of useful reactions would take place only in conformity with the well-being of the organism.

This is a very rough outline! It appears to date from the time of Descartes, who, in order to explain reactions, introduced little pipes running all over the body. But the physiology of today hardly permits of any more exact metaphor. And it may be said that things go on AS IF this reservoir, these taps, and these locks, with their variable, changeable keyholes, really existed. The exact way in which these arrangements are made in the nervous system matters little to us psychologists. What is most important here is to convince ourselves that the selection of a reaction can be carried out mechanically by the stimulus, under the influence of interest.

Lest we despise the archaic aspect of a mechanical hypothesis, devised for symbolical purposes three hundred years ago by the inventor of analytic geometry, it is well to recall the support given to this biologic symbolism by so modern a physiologist as Thomas Huxley. This scholarly exponent and proponent of the doctrine of evolution and of the reign of natural law showed that Des Cartes' picture of pipe lines and valves satisfied all the essential principles of nerve action. No better device of explanation had been found, where-withal to schematize the complex relations within the nerve mass.

EVALUATION OF OTHER ANALOGIES

To be sure, the German neurologists, in their text books, have shown a strong bent to compare the hierarchy of nerve-paths ("archi-

tectonic") to the railway system of Germany; perhaps because its rigid scheme of first, second and third class railway lines, regimented for military purposes under direct State control, offered a fascinating resource for analogies with the integrative aspect of neurone relations. But analogies are analogies, and must be judged by purely practical results. The essential justification for the Railway analogy is found to lie almost exclusively in its aid to the conception of switching and of conduction. It is the transfer of the train over a track (like a nerve tract) and its shunting from one set of rails to another that sustains the resemblance to the nerve system. The focus of the analogy, so far as it is instructive, lies less in the rails as such than in the switches, and they in turn are perhaps less suggestive than those mechanisms known as switching towers from which a "puzzle" of many switch points in a large terminal train-yard is controlled. But in final analysis, the likeness of railroad shunting mechanisms to the switching devices of nerves brings us back to the lock and key principle of control described by Claparède. I might allude again to a mechanism just now coming into prominence, the automatic telephone switchboard. It supplies to-day for the use of our puzzled imagination the necessary principles for refining infinitely the conception of that unlocking mechanism pictured by Claparède. Like Des Cartes he assumes the need of some valve-like device to control the pipelines of nervous energy.⁹

Now, the dream being viewed as an operation of the nervous system and spoken of in mechanical terms as having a "drive" as the source of its re-directed energy, cannot be visualized unless we accept the duplex system approved by Claparède, Huxley and (originally) DesCartes. The two portions may be spoken of as the "tap-system" and the "reservoir system." The point is that the pipelines conduct

⁹Likewise, we may assume that the necessary mechanism for such control in neurone systems is not beyond the reach of our imagination since there has been developed an automatic switchboard to interconnect almost any number of telephone subscribers. Indeed, the parallel is so complete that my only reason for not inserting it here is that it would carry us far beyond simple analogy into the most exact technicalities of Telephony and Physiology if we should wish to grasp the completeness of the parallel. Short of that, we should be satisfied to reflect that the automatic telephone and the nervous system are alike devices for limiting down the effect of external "calls," or stimuli so that there shall eventuate a gradually narrowing effect that confines the completing stimulus to one particular "number" or receptive center of the system. Like the telephone, the nervous system mediates many such "calls" simultaneously. Dreams represent an opportunity to pick out a few such proceedings for observation. The irrelevancies of dreaming are being analyzed here in the same mechanical way that the "chief operator" of an exchange studies the occurrence of "wrong numbers."

the energy of the reservoir in comparatively simple ways under a complex interlocking control from the tap system.¹⁰

Imitations of the nervous system on the duplex principle will no doubt be developed as soon as the state of psychology makes it desirable. In the meantime, we shall use the foregoing analogy as a guide to steady our insight into the working of actual instances.

The Pantry Cupboard Dream, illustrates the simpler type of drive that we will call the sensory drive. This example shows that there can be an almost geometrical relation between the forces exerted by two known stimuli on the one hand, and the characteristics of the successive responses to these stimuli, in the shape of dream imagery. In this case, fully described in the paper entitled "The Irrelevancy of Dreams," the two conspiring stimuli were, (a) hunger and (b) sound. This was a screeching sound possessing the tone-quality of horror, which arose from the rasping of car-wheels on the curve of a railway track. It was indicated by a diagram that under the peculiar circumstances of the dream (the dreamer being asleep in the seat of a railroad coach, fully relaxed both mentally and physically) the stimuli in question had full and virtually exclusive sway in determining what images should be evoked in the dream. Under the circumstances, the sense of hunger was necessarily feeble as compared with the gradually intensified screeching noise that finally waked the dreamer. This changing ratio of intensities showed its influence in three stages, each characterized by specific imagery showing the changing relation to either cue. First, the phantasy is dominated by a picture involving the idea of hunger. More specifically, the conditions of apperception at this stage were satisfied by the representation of a little boy stealing *raspberry* jam from the cupboard. As the relative intensity of the sound increased (the hunger stimulus being presumably fixed in intensity) the scene changed, and the child in the dream picture registered emotions of fear, horror and surprise entirely consonant with the attributes of the sound in question. One sensory quality was obviously "rasping," while the emotional connotations of the tone quality were likewise properly sensed in the dream. In the third stage, the intensity of the sound entirely overshadowed that of Hunger, and the dreamer (identifying himself with the child) is no longer interested in the jam and the cupboard but

¹⁰In the study of dreams, the essential contributions from these two influences can usually be pictured, so as to show in what way the seemingly absurd reaction was determined by a tap-control acting upon a reservoir of previously prepared dispositions.

wholly absorbed in the menacing screech that seems to enter the pantry through the window and the door adjoining the kitchen. It is as if the whole plot of the story had been set, like a moving picture scenario, so that when the child perpetrated (in Scene 1) the raid on the pantry cupboard, he should be overcome in the middle of his act (Scene 2) by a sense of wrongdoing that should lend significance to the menacing and horror-striking sound.¹¹

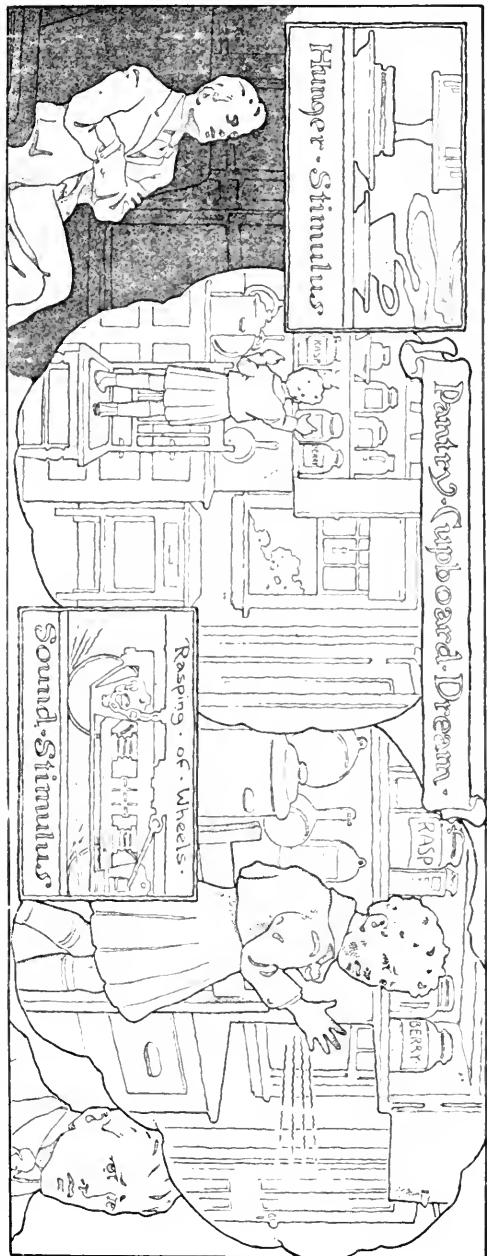
CONFLUENCE OF STIMULI THROUGH CANALIZATIONS

To explain such a dream, it is necessary to have a conception of the two stimulus-drives exerting a concurrent effect upon definite canalizations within the nervous system. Stimulation from remote points of the associative centers (however disparate the content of each separate reaction) receives a unified response through concentration upon one automatically selected junction-point within the nervous system. This is the resolution of psychophysiological forces in its simplest form.

An *index of relevancy* can be "graphed" in the Pantry Cupboard Dream, with an extraordinary and almost unbelievable degree of exactitude, in spite of the shifting values. That is, the compounding of effects from two stimulus-drives, when they are sufficiently simple, can be visualized without any recourse to complex notions of the soul's activities. It is not necessary to resort to any such conception as Symbolism and Censorship. This simple sort of drives from remote sources eventuating in a rendez-vous at a particular point where their effects become compounded (arousing thus a particular image of memory) affords a basis for building up the conception of other resolutions of forces within the nervous system. It brings into view the concept of the Automatic Self as expounded by Huxley.

It will be seen that the resolution at each scene of the Pantry Cupboard Dream is a different one. At first the dominance of the hunger element causes the fancy to incline toward the picture of an eating situation. With the alteration of the ratio between the drives' intensities, there is a corresponding shift in the memory centers: further elements of fancy are brought in, following the principle of relevancy that requires (dynamically) an exact relation to be contin-

¹¹Bergson would say that the bare outline furnished by the stimulus of the sound-quality leads to the "inserting into the frame" of the consonant image from memory. But Thomas Hobbes has given an equally suggestive scheme of description when he speaks of the "reciprocation of motion" between memory and sensation. According to his doctrine, we fill in the gap with what fits, "as dreams of cold breed fear."



DREAM SUGGESTING THE CONFLUENCE OF STIMULI BELOW THE THRESHOLD OF AWARENESS

In order to understand how seemingly irrelevant images are aroused and thus form the dream, it is necessary to understand the principle of "approximation" illustrated by the Scratch Reflex Dream and the principle of time inversion illustrated by the Door Slam Dream.

While the latter instance represents reactions to a single and uniform stimulus, the present illustration carries the conception of apperception and time inversion one step further. For here we have two known interacting cues stimulating the apparatus of memory. The almost unbelievable accuracy of this mechanism is illustrated by the successive evocation of images distinctly related to both cues. First, the imagery is related to *hunger* with no

suggestion in the picture of *sound*. Then there is a second stage where the *sound* is represented to the child as a horrifying screech suggestive of terror. Finally there is the man's waking to the realization that the train's wheels are *rasping* upon the curve.

The whole dream results from the interacting cues. The visual imagery at each step of the dream was evidently determined by the relative intensities of the two stimuli according as the dream progressed. In the original article, this ratio was represented as an index of relevancy and accompanied by a geometrical diagram showing the summation of stimuli that called forth in turn each phase of the dream.

uously maintained between the cues in action and the response of memory elements. This "grading" of response has been shown by Sherrington to be eminently characteristic of the mammalian nervous system.

The fact that we speak of dreams as "absurd" and "irrelevant" must not obscure the fact that apart from our waking standards of what is and what is not relevancy, the dream imagery is always germane to whatever stimuli obtain influence—not even disregarding the ratios set up among such influences. It is only a very poorly furnished memory that cannot provide the dream consciousness with combinations and collections of images achieving a high degree of this type of relevancy.

If this outline of the resolution of forces in the association of ideas seems complex, it is largely because the study of associative memory is in a parlous state, without standardized terminology. It is fortunate for my somewhat lame explanation of the Pantry Cupboard Dream that twenty years ago Mr. Bergson had to some extent anticipated—with that *flair* which is characteristically his—the details of the coming explanation of dream processes.

M. Bergson has been apparently captivated by the experiments of Goldscheider and Mueller, which bring out the mechanism of apperception in those cases where one reads correctly mis-spelled words or phrases, in a shorter time than is allowed for full vision of the spelling.

BERGSON'S IDEA OF FAMILIES OF MEMORY IMAGES

. . . It is this kind of hallucination, inserted and fitted into a real frame, that we perceive. . . . Besides, there are many interesting observations to be made upon the conduct and attitude of the memory during this operation. It is not necessary to suppose that images are in our memory in a state of inert impressions. They are like steam in a boiler, under more or less tension.

At the moment when the perceived sketch calls them forth, it is as if they were then grouped in families according to their relationship and resemblances. There are experiments of Muensterberg, earlier than those of Goldscheider and Muller, which appear to me to confirm this hypothesis, although they were made for a different purpose. Muensterberg wrote the words correctly; they were, besides, not common phrases; they were isolated words taken by chance. Here again the word was exposed during the time too short for it to be entirely perceived. Now, while the observer was looking at the written word, some one spoke in his ear another word of a very different significance. This is what happened: the observer declared that he had seen a word which was not the written word, but which resembled it in its general form, and which besides re-

called, by its meaning, the word which was spoken in his ear. For example, the word written was "tumult" and the word spoken was "railroad." The observer read "tunnel." The written word was "Trieste" and the spoken word was the German "Versweiflung" (despair). The observer read "Trost," which signifies "consolation." It is as if the word "railroad," pronounced in the ear, awakened, without our knowing it, hopes of conscious realization in a crowd of memories which have some relationship with the idea of "railroad" (car, rail, trip, etc.). But this is only a hope, and the memory which succeeds in coming into consciousness is that which the actually present sensation had already begun to realize.¹²

Through the medium of this eminently suggestive language, we may well conceive the Pantry Cupboard Dream not only as a case where the resolution of forces takes place with mechanical accuracy but as a suggestion that a canalization by families, may similarly underlie the dynamic unfolding of our most complex mental states. When we analyze these we find ourselves in a new universe of discourse, simply because we cannot follow the larger number of permutations and combinations of the simpler units. It does not alter the principle of explanation that we have found it possible to work out in the diagrams accompanying the Pantry Cupboard and the Door Slam Dreams. The more complex states of nerve activity represent "the entanglement of the conditions," as Herbert Spencer might say.

Even in dreams more complex than the Pantry Cupboard example, we are able to account for the minutest details in the plot of the dream story and to explain some of the most incongruous and seemingly accidental departures from so-called "relevancy"—as waking standards go. So accurately do dream-drives operate and so clearly can they be traced that we are able to understand how a man in a dream should lead a horse from the right side rather than from the left and how a normally handsome man should appear in a dream with an enlarged ear or with horns on his head. Such matters of detail could be multiplied indefinitely to show that the dream obeys firstly the principle of sweeping up into a reconciliation all the varied impulses that have access to the sensorium. Further, according to their several potentialities, external and internal drives obviously conspire on dynamic principles to compound their several effects.

Section VI: Qualified Statements Concerning Internal Drives

The external drives, which we have somewhat fully considered, belong to the "tap system." This brings forces to bear upon particular portions of the

¹²*Dreams* by Henri Bergson; B. W. Huebsch, New York, 1914. Originally appeared in the *Bulletin de L'Institut Psychologique*, and *Revue Psychologique*, 1901.

receptor nervous system. But this, in turn, is in a state of more or less preparation for specific ends, by what we call "facilitations." At this point, the reservoir concept comes in and compels us to view separately (a) the canalizations themselves, as innately give or as acquired, on the one hand, and (b) the particular set, or tension, or pressure of their contained "nervous energy." Not even DesCartes with his hydraulic analogies, of the Versailles waterworks type, pretended to do full justice to the possibilities of mechanistic concepts in this field. We must reserve for a future occasion the attempt to simplify the concept of the "reservoir system" by resort to modern mechanical analogies. In concluding, the idea we wish to leave is that while physiology presents the nerve-system as an infinite complex of neurones and synapses, yet the inventorial analysis of dreams offers a simplified conception of their working, in associative memory.

From practical dealing with the behavior of consciousness in dreams, we learn that the labyrinth of nerve paths can be comprehended as the mechanistic tool of the personality.

It is not then with sensory drives merely that we are concerned. These represent only the impinging of forces that are external to the nervous system itself. Even the sensory impressions coming to light in nightmares originating from indigestion or in flying dreams dependent upon kinesthetic and so-called "blood-vessel sensations," should not be classified as stimuli internal to the nervous system. We must reserve this designation for those drives, which are generated from within. We may think of them as pent-up forces of the nervous system.¹³

¹³General conception of psychic retention of "dispositions" as taken from Part II—Chapter 8 of *Elements of Physiological Psychology*. By Ladd and Woodworth, Scribners, 1911.

Section 29. If we now turn from the "first event," or impression, and pass over the intervening time, during which the disposition left behind by the impression is gradually dying out, we come finally to the "second event," the so-called "*reproduction*" or "*recall*." Neither of these terms is perfectly correct; for the original impression is not always, and perhaps never, fully and accurately reproduced. Few people can reinstate an impression in all its sensory fullness and vividness; many can accomplish this with moderate success; while others are quite incapable of seeing their breakfast table "in their mind's eye," as if it were actually before them, though they are fully capable of recollecting aspects of, or facts about, the original experience. This difference between individuals is spoken of as a difference in their powers of imagery.¹ Besides this deficiency in fullness and vividness, all reproduction, when tested carefully by comparison with the original experience, is apt to be found infected with certain erroneous factors.

It will be remembered that in considering the topic of "association times" (see above, p. 493) we found the stimulus A calling up the reaction B, although both stimulus and reaction were internal rather than sensory and motor. This was explained as due to a "disposition" left behind by the previous experience. Recall, then, may—at least sometimes—be considered as a certain type of reaction. And concretely, the condition would seem to be somewhat as follows: The individual, being in a given situation, and being adjusted or prepared, voluntarily or involuntarily, in a certain direction, and having within him a host of dispositions or reproductive tendencies of varying strength and manifold connections, is affected by a certain stimulus and reacts to it. This reaction is his recall or reproduction, and it is determined by the stimulus, by the individual's present adjustment, and by his past experience as retained in reproductive tendencies.

¹Galton, *Inquiry into Human Faculty*, p. 83 (London, 1883).

In fine, the sensory drives (external excitations coming from stimuli in the course of the dream) represent only the tap-system that controls the movement of the nervous fluid in the canalizations of the nervous system. It is not wise to dwell unduly on these aspects because the responses to external stimuli belong to a field that can be very well mapped out by ordinary experimental methods. Further, our conception of the exactitude of the nervous system in mediating the process of resolution has already been greatly enriched by other studies showing the delicacy of neural adjustments in the speech center. Pathological evidences from the aphasias show the minuteness of adjustment whereby the deprivation and the recovery of grammatical speech must be mediated. It is, says Bergson in his inimitable way, as if the disease knew grammar!¹⁴

Admitting the possibility of such infinitely delicate adjustments mediated by the nervous system, we can only hope to piece out our comprehension of their mechanism by reflecting upon the peculiarities of that wonderful newly perfected device known as the automatic telephone. As I conceive it, the essential principle of this mechanism is that each one of a series of stimuli, as given to the transmitter-dial, is compounded with the other stimuli, in its effect upon the automatic telephone "central," so that the ultimate impulse is progressively narrowed down to the appropriate outlying minor center.

When dreams are sufficiently simple, as we have seen, it becomes possible to analyze the compounding of stimuli upon the memory "centrals," in the mechanistic sense just indicated. The present paper has supplied illustrations that correspond mainly to the operations of the tap-system, showing therein the confluence of stimuli and the resolution or composition of neural forces.

IMPORTANCE OF DRIVES INTERNAL TO NERVOUS SYSTEM

We noted that it was a characteristic of the external drives, and almost a condition of so calling them, that their resolution followed closely upon their application to the organism. Otherwise, if their

¹⁴Bergson, page 57, *L'Energie Spirituelle*, 4th Edition, Paris, Felix Alcan, 1920.

M. Bergson speaks eloquently on the evidence of the aphasias; but his explanation, if quoted here, would carry us into his doctrine of *effort* in perception and memory—which would only confuse my own explanation of dreams. In an earlier paper in the *Journ. of Abn. Psy.*, I have paid my respects to Professor Bergson's unexampled presentation of the dream problem, but also tried to show that his conception of effort does not fit in with an explanation of dreams that is carried out on the plainly mechanistic level. (*The Irrelevancy of Dreams*, August, 1916).

effect were long delayed, such effects would enter upon the status of internal drives.

The internal drives, which we have not attempted to consider fully, represent those more complicated and debatable drives that reside within the nervous system and seem to originate there. At least, if the external drives originated them earlier, the passage of time and conditions of their storage within the system, result in such a transformation that what we then call the internal drives have ceased to bear a fixed and determinate relation to the immediate circumstances of the dream. Thus the internal drives seem to obey less rigid laws than the sensory drives, and, indeed appear to own a large and variable element of spontaneity. They are inexplicable unless we invoke the concept of the reservoir system, which is complementary to the tap-system of Claparède.

These are the drives that are now so widely discussed for purposes of social psychology, under the name of instinct, wish, conation, hope, sentiment, interest, and the like.

In closing, we may briefly remark upon some of the points of similarity and dissimilarity that must characterize our comparative study of the internal and external drives, which is a matter for the future.

The levitation dreams that I presented in earlier papers, particularly the so-called Angry Sheik Scene of the Warm Clothing Dream, show how sensory controls can greatly hem in, or narrow in scope, the free play of internal drives. Good technique requires us to discriminate between the two. Otherwise, like the Freudians', our interpretations will attribute to internal drives the influences that should be ascribed to the conditions imposed by external cues acting through the sensorium.

The distinction to be maintained is that the immediate and external stimulus-drive operates the tap system, while the drive surging within the nervous system, with or without external aid operates on the dispositions in the reservoir system.

Were hope, anxiety, wish, fear, and other emotional tendencies so simple units of behaviour as the apperception of a screeching noise or the apperception of hunger, the problem of drives would be solved on the basis of the Pantry Cupboard Dream. As a matter of fact, the problem of personality still eludes us because we have not been able to analyze sufficiently the internal drives. We have not even been able to agree on names to call them by. And Social Ethics no less

than Philosophy both stand in need of the enlightenment about character and the relations of mind and body that psychology is expected to produce in this domain.

Again, what better mode is there of approaching these internal drives than through the study of dreams?

THE FUTURE STUDY OF INTERNAL DRIVES

Through the example of the Snake Dream, which is free from the more common external drives, we see that it is not impossible to delimit and describe some of these internal drives, such as those touching manipulation, impersonation and self-assertion. Unfortunately, the internal drives are not subject to that ready family classification that Bergson finds so plausible in the case of the uncomplicated reminiscences of life's experience. (See quotation above). On the other hand, it is fortunate that in particular instances we are able to see that on a day certain, preceding the dream, a particularly concrete and definitely circumscribed wish was entertained. The effect of this wish can be traced in its influence upon the dream and one can identify in the items of the phantasy (as inventorially analyzed) the earmarks or imprint or "cachet" of the wish itself, as we come to know it through the previous history of the dreamer. Often this "cachet" is so distinctive that it signalizes the same internal drives, as elements of personality holding over from one dream to the next through a series. And this may reveal itself over a period of years. Specific identification through dreams of drives dating back one, two or three decades is a common experience for the onirologist. Yet they may have been entirely unsuspected by the individual subject.

The case of Theresa W., reported in my preceding paper, should be a fruitful case for the study of internal drives, as it involves the reconstitution of a memory system and set of emotional drives originating thirty years before the dream investigation was made. It also illustrates in a peculiarly exact form the reconciliation of tendencies, hitherto in conflict, between the childhood personality and the adult of thirty years later.

To understand such cases of internal drive, we shall have need of what I have called the Delage-Woodworth principle of the "perseveration of the unadjusted." (This Journal, Feb.-March, 1916.) But to comprehend in our judgments the principle of the resolution of forces, as I have applied it here, we shall need, I believe, to cleave to McDougall's biological principle of the fundamental unity underlying drives of the internal sort.

In individuals in whom the apparatus of memory has not become unduly complicated by the accumulation of experiences, (that is, in sound and well bred and reared children) the interplay of internal drives and their mutual deflections in a given dream are almost as easy to reconstitute and map out diagrammatically as are the effects of concurrent sensory stimuli.

These simpler cases should be the stepping stones whereby we may elevate our understanding high enough to grasp the more puzzling phenomena of adult personality, and of that complication of personality that is called the "psychoneurosis." Thus we shall find it easier to take the measure of those cases of character defect, for instance, where there is a vast and consolidated mass of childhood memories and drives emanating from them, that still operate to control the adult personality in one or more phases of its adjustment.

The avenue to the understanding of human character (whether for Philosophy or Ethics) will continue to be the study of dreams, in the direction we have noted when discussing here the simpler phases of "drive." Our goal should be the elimination of confused notions of mental mechanisms and the substitution of clear thought about the component elements in human personality.

SUMMARY

Section I: Why Dreams Are Not More Scientifically Studied

The slow progress being made in reaching a satisfactory explanation of dreams is due to a deficiency in the "drives" that move the interest of observers: (1) The dreamer himself is not always scientifically minded and is influenced by egocentric drives. (2) The drive of scientific curiosity falls short of the goal for lack of sufficiently laborious study of other people's dreams at first hand. (3) The reputed absurdity of dreams and the tediousness of dream narratives make serious investigation precarious.

Section II: The Demand for Unified Views of Personality

The psychoanalytic formulation of dream processes remains unsatisfactory because it over-simplifies the data of dynamic and social psychology and disregards the large part played by purely physiological and sensory factors in driving the dream, let alone wishes, desires and other motives.

Section III: The Bizarre Compounding of Drives in Dreaming

Many specific cases of seemingly absurd dream imagery can be explained as the concurrent effects or confluence of separate drives. Among dream-drives one is logically compelled to include ordinary sensory cues. They should be distinguished and classified as external drives. These are apt to require—in the case of dreams—a process of "resolution" as complex as that demanded by the other sort of motive power or motives, namely the drives

that seem to originate internally to the nervous system. In the elaboration of any given dream, Nature fails to recognize any such boundaries: for external and internal drives alike pursue their career toward resolution, commingling their effects in the phantasmagoria, without distinction. This is not what we should expect in waking thought, and that is what makes dream-fancy so often enigmatic.

Section IV: Dynamic View of Nervous System Clarifies Dream Drives

If we take our first steps in dynamic psychology on the concrete basis of studying simple drives in the dream, we shall inevitably realize that a dynamic concept of the neural machine is essential to progress toward disentangling the mixed motives encountered in social psychology. Whether we deal with the emotions or the intellectual processes underlying the formation of sentiments in normal life and of "complexes" in the sense of abnormal psychology, we shall be forced to acknowledge the immense contribution of mechanical and certainly physiological elements to the sum of adjustments that determines behavior. This takes us back to a consideration of older conceptions too long neglected; notably, we turn to the formulation of the "automatic self," originally described (if not specifically so named) by René DesCartes, and amplified by Huxley.

Section V: The Canalization Concept of the Nervous System

The DesCartes-Huxley-Claparède archetype of the human nervous system represents a mechanistic conception to which psychophysiologists are gradually reconciling themselves. It is being generally admitted that the only way to conceive of the nervous system is in terms of canalization: but the emphasis of the "Behaviorist" school upon the word reflex and the promises held out by Pavlov's demonstrations of the "conditioned reflex" have diverted attention from the still serviceable term canalization, and its rich implications. While it is the function of "reflexology" to demonstrate experimentally the integrative and hierarchic aspects of the nerve paths, it would be a mistake on the part of psychologists to abandon all hope of finding their way through the labyrinth of mental reactions by methods peculiarly their own. The psychoanalytic school having chosen to escape from their dilemma by flying into the face of facts on wings of anthropological fancy (as insecurely as Icarus of old) it remains for the psychologists to find some guiding "thread of Ariadne." This desideratum, we submit, is furnished by the "tap and reservoir" analogy recently revived in psychology. It corresponds to the scheme of external and internal drives, and is useful in refining the concept of canalizations. By holding to this thread of thought we shall not get lost in studying dreams, and we shall the sooner make an end of the mystery to which we have too long paid tribute.

Section VI: Qualified Statements Concerning Internal Drives

The external drives, which we have somewhat fully considered, belong to the "tap system." This brings forces to bear upon particular portions of the receptor nervous system. But this, in turn, is in a state of more or less preparation for specific ends, by what we call "facilitations." At this point, the reservoir concept comes in and compels us to view separately (a) the canalizations themselves, as innately give or as acquired, on the one hand, and (b) the particular set, or tension, or pressure of their contained "nervous energy." Not even DesCartes with his hydraulic analogies, of the Ver-

sailles waterworks type, pretended to do full justice to the possibilities of mechanistic concepts in this field. We must reserve for a future occasion the attempt to simplify the concept of the "reservoir system" by resort to modern mechanical analogies. In concluding, the idea we wish to leave is that while physiology presents the nerve-system as an infinite complex of neurones and synapses, yet the inventorial analysis of dreams offers a simplified conception of their working, in associative memory.

From practical dealing with the behavior of consciousness in dreams, we learn that the labyrinth of nerve paths can be comprehended as the mechanistic tool of the personality.

P. S.—Some explanation should be given of the accompanying illustrations.

The large drawings represent the dreams that were discussed in the earliest papers, when I was not relying upon the help afforded by illustrations. Fuller experience in describing dreams led to the conclusion that the true character of a phantasy is rarely grasped without the aid of a picture to focus attention. Naturally, however, the artist has filled out the scenes with details which would not appear in the dream inventory; for a dream can notoriously consist of the most intangible material, and imagination is seldom exact in the way of draughtsman has to be in order to make his drawing "hang together."

For example, the inventory of the *Snake Dream* consisted at most of fifteen items. The artist has been obliged to do justice to many more unlisted items, implied by the locality of the dream. But all the "real" memories are depicted correctly, from diagrams and snap-shots furnished the artist.

The *Door Slam Dream* is, of course, not intended to be presented with historical accuracy, being a hypothetical example applicable to many well-known cases of time-inversion.

The *Scratch Reflex Dream* is represented in its essential features and perspective exactly as seen by the dreamer.

The same is true of the *Pantry Cupboard Dream*, save for the impossibility of representing the stage where the horrible sound alone fills the picture. The jam *was* raspberry; and the dreamer did speak of the sound as *rasping*, when relating the dream to the artist. The possible connection of ideas did not suggest itself till the finished drawing was presented. Then the artist was asked to emphasize the *rasp* feature in order to bring out the likely mechanism: sub-conscious perception and expert recognition of the stimulus quality (the dreamer having made professional studies of carwheels) causing unconscious "pun" under influence of hunger.

This deflection of the stimulus (*rasp*) from its normal course in association (whereby the pun is produced) is not as absurd as it would seem. The laws of the conditioned reflex are applicable here; and one could profitably discuss the pictured reaction in the sense of the school of Pavlov. (Cf. paper by George Humphrey, this *Journal*, Feb., 1920.)

My attempt to present dream data in detail from studies of more than ten years would have failed without the aid of the members of the Cartesian Research Society of Philadelphia.

OVER-VALUATION OF THE SEXUAL AS A DETERMIN-
ANT IN THE ETIOLOGY OF THE PSYCHONEUROSES

REPORT OF A CASE

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MISS E. S., 22 years of age, intelligent and fairly well educated, presented herself for analysis on November 3rd, 1917. She complained of being "very nervous," unable to sleep, constantly depressed, suffering from severe headaches, spells of weeping and suicidal tendencies. She reported excellent health until two years previous, when an operation for appendicitis became necessary. Before this time, she "didn't know she had nerves." Her mother had been ill for years, the patient explaining said illness as "female trouble." Father healthy; four brothers and one sister—all healthy. Menstruation commenced at 11—an interesting fact in the light of her subsequent activities. No noteworthy physical findings other than marked obesity.

Following the presentation of the preliminary history, I applied the Association Experiment of 100 words, in order to gain a perspective of the complexes leading to a psychological diagnosis. I have found the Association Experiment useful in opening a direct road to the complexes.

Briefly, the result of the Experiment may be estimated in the following summary of the reactions:

Inner Associations.....	74
Outer Associations.....	20
Clang	2
Indirect	4
Reproduction Anomalies.....	36

Probable Mean reaction time—3 seconds. Number of reactions exceeding 3 seconds—31.

Average Figures of Educated Women (Jung's Tests)

Inner Associations.....	35
Outer Associations.....	58

In the case under consideration we note a predominance of Inner Associations over Outer that is far removed from the Average Figures of Educated Women. The patient applies the stimulus word subjectively, introducing personal elements with strong emotional tone. With the normal (average), the Outer Associations exceed the Inner; but here we find 74 Inner to 20 Outer. Taking into consideration the number of reactions exceeding 3 seconds (her probable mean time), and considering the 36 disturbances in Reproduction, we may draw the conclusion that the patient is troubled by numerous complexes. There is an attempt to conceal her inner pictures and wishes by intense resistance and emotional inhibition—converting them into physical symptoms. This is the mechanism of Hysteria. (Studies in Word Association. Dr. J. C. Jung).

It will not be necessary to give a record of the complete experiment—one hundred reactions. Only a few of the reactions were analyzed, the subsequent analysis proceeding from the material brought to light at each visit. The Association Test furnished a ready means of attack—a purpose for which it is admirably adapted.

The first disturbance in reproduction occurred at Reaction No. 2, so I requested the patient to associate freely to this reaction, giving her the usual instructions relative to this method of procedure. She repeated her thoughts so slowly and falteringly that it was possible for me to write out her associations verbatim.

<i>Stimulus Word</i>	<i>Reaction</i>	<i>Reproduction</i>
Green	Blue	Dress

She gave the following associations:

“Dress—trees—played under trees always where there was grass—sister and I used to herd the cows out—trees with bee-hives—flowers—peaches—apple-tree—swing—ghost stories—only time I was ever frightened—sister, cousin, brother Fred and papa’s adopted brother were sitting in the swing telling ghost stories—oldest brother had been with us—he went in the house—got a sheet—threw it over him, came walking around the corner of the house—we ran immediately—except cousin Elizabeth who fainted—sister and I played a good deal in this swing—we used to dress up in mother’s dresses—played with our dolls—learned to sew in that swing—we moved from there to where we live now—there were cherry trees—had our clothes-line on this tree, hard work from then on to now—just after we moved

there our wash-woman left us—I did the washing and hung it on this line—mother sick, not able to work—sister wouldn't help—left most for me to do—went to school until I graduated—did work at home all the time in between, used to go home after school—do all the washing and hang it up next morning before school—went four years without missing a day of school, cared for home besides."

Ordinarily we would expect a girl of her age to direct her attention more fully to "dress," the first word that she utters in the associations. But the attention is at once deflected to her childhood reminiscences. She was born and brought up in the country and therefore reproduces appropriate memories. The attention returns to the thought of "dress" when she mentions the imitation of the mother and learning to sew. She had gradually become very much depressed as a result of these reminiscences, developing an attitude of self-pity. It has been often observed that self-pity requires the compensation of self-indulgence. May we suspect this here?

We are permitted a glimpse into the childhood of this young lady—a period of learning by means of childish pleasurable occupation, offset by hard work due to the illness of her mother. There is a shade of resentment against the mother; also against the sister because she "wouldn't help." Theory might lead us to assume an identification with the mother: doing the mother's work, "dressing up" in the mother's clothes, etc., but the material thus far would not justify any conclusion bearing on her neurotic disturbance. While the analyst may be permitted to hold certain possible mechanisms in mind, it is nevertheless an indication of poor technique to be prejudiced by hints in the material. Subsequent findings very often bring forward other mechanisms of far more direct influence as causative factors in the illness. The critics are justified in objecting to the rash manner in which psychoanalytic material is frequently presented.

Reaction No. 4 showed both a failure in reproduction and a reaction time of four seconds, one second in excess of the mean time. I therefore asked for associations.

<i>Stimulus Word</i>	<i>Reaction</i>	<i>Reproduction</i>
Water	Wet	Glass

Associations:

Boat-riding—went to school at Normal—we went boat-riding almost every evening—girl friend—five girls staying at the house—

on boat only once with boys at a picnic—can't remember their names—two boys and two girls—good time—fixed a lunch, went to park—boat-riding—home at ten o'clock because we had to be—another night while I was there I went auto-riding with a boy friend—had to come home in a terrible down-pour—went with him while I was up there all the time—roomed in a flat that Summer—hot as it could be—one of the boys took a girl boat-riding—they started to change places in the boat—boat tipped over—he came up to the house afterwards to see one of the girls—had a cold—she gave him a glass of Jamaica ginger to cure his cold—another night he was there before we came home, with another boy—took some rouge and powder—fixed themselves like clowns—chum and I went down to the confectionary with them—had lots of fun—we laughed hard—heartily.” She explains her error by stating that hard laughter hurts while hearty laughter is pleasant. Such repetitions are often indicative of inner resistance—complex indicators.

These reminiscences of youthful pleasure and amusing pranks might lead one to suspect erotic fancies in social contact with boys; but, on the whole, the associations seem quite normal for a girl of her general make-up. True, there seemed to be a thread of embarrassment running through the associations, but I withheld judgment, depending upon her to reveal the source of such embarrassment as the analysis proceeded. In this way she discovered nothing particularly significant in the associations and was thus encouraged to proceed.

When I asked her why she felt depressed, she was silent for some few minutes, apparently struggling with a painful thought. After considerable urging, she said that during her operation for appendicitis, the ovaries were found to be diseased and were removed. This she learned from the surgeon six months after the operation, when her suspicions were aroused by the non-appearance of the menses. She then realized that she could never become a mother. Being very fond of children, she said that she had always hoped to have a family. When she discovered that this was impossible, it preyed on her mind. The description of the details of her trouble was lengthy. She spoke freely and stated that she felt better for having done so as it was the first time that she had ever fully related the circumstances to anyone. This new feature in her life marked the beginning of the “nervousness.”

It is significant to note that there was no indication of neurotic disturbance during the six months that she was ignorant of the facts.

This would seem to eliminate the physical change as a causative factor in her neurosis, permitting us to view the symptom-complex as functional—a Psychoneurosis.

With the discovery of the above facts, we might be tempted to accept her statement at its face value and account for the disturbance on the somatic side, re-enforced by the mental determinants. Would it be possible, however, for such a radical disturbance to be initiated by the mere discovery that she could never bear children? Why had she never spoken to anyone about the matter; her mother, for instance, or at least a good friend? What caused the diseased condition of the ovaries necessitating their removal? Was this desire to be a mother so firmly established (dolls, mother's dresses, etc., Associations to reaction No. 2) that life no longer held any attraction or charm for a good-looking, apparently healthy young woman? Does the evidence warrant the assumption that the emotional upheaval was caused by her inability to adjust herself to the prospect of a childless life? Would suicide and insomnia be reasonably expected as the result of such regrets?

We need more information before assuming any such thing. If the ovaries were infected as the result of conduct that caused her to hate herself, a moral struggle, we might be justified in giving her statement credence. But she has not offered such information. She disclaims knowledge as to why the ovaries became infected. Surely there is something missing in her statement of the cause. Hidden behind this affair must be a vast fabric of exaggeration and distortion. And yet, she seemed to be such an innocent-appearing girl that suspicion regarding her virtue appeared unjustified.

On November 10th, one week after her first visit, we entered into an intimate discussion of her childhood, with reference to habits, attitudes, social contacts, etc. Masturbation was mentioned—a term that she did not understand. She knew it as "self-abuse," however, and recalled her mother speaking of a boy who abused himself and became sickly. This boy lived with them. There was nothing in the patient's attitude to justify a suspicion of onanism, so the discussion drifted to the recognition of erotic feelings and desires. She admitted having had such feelings but blocked completely at any approach to the subject of coitus. Her long periods of silence were accompanied by spells of weeping. It will be remembered that this was one of the symptoms which she reported at the beginning. She meditated long after each bit of information elicited from her. I finally told her that the analysis

must be abandoned unless she told all of the truth and unburdened her mind. But I did not urge her further at this time. I wanted her to consider this idea seriously so as to influence her attitude in the future. She promised nothing but made another appointment with an air of discouragement.

At the next visit I asked her for associations to Reaction No. 5, on account of the long reaction time and the significance of the reaction word.

<i>Stimulus Word</i>	<i>Reaction</i>	<i>Reproduction</i>
Dead	Mother	Body

She recalls dreaming that her mother died.

Associations:

"When I was very small, mother had a very severe illness—had a tumor in the womb—if mother should die now, I'd go home and take care of my little brothers—this would be disagreeable—it would be disagreeable for me to go home under any circumstances—I don't like it there nor the people who live there—they have always talked and unjustly I feel too, about everything I've done and haven't done. When I was brought to the hospital, they said I was to become a mother. I wasn't. It wasn't right they should talk that way. I taught school out there one term. I punished a youngster because he needed it or at least I felt he did. His folks took the matter up with the directors—unpleasantness—wasn't very long before they came down and apologized before the school for what they had said. I was going with a young man at home at that time—we had quite a serious case—we were engaged—he came to ——— one night and met another girl there. A traveling man, a salesman who is a friend of mine, came over on the same train that he did. He also knew that we were engaged and he told me about this girl meeting the fellow at the train. He registered at the hotel just after they did. He told me about it and I gave this fellow back his diamond ring. He told a great many things about me that were not true. I don't know just what they were." She burst into tears, refused to tell any more and resisted all urging.

Evidently a very much abused young lady. But we begin to think that she is not so unsophisticated as she appears. During the recital of these associations, she appeared quite worldly. Her persistent blocking and stubborn resistance should certainly be investi-

gated. Viewed as a whole, these associations are very interesting. She dreams that her mother dies, which as a wish-fulfillment would lead us to believe that her feeling for her mother conceals an unconscious antagonism. In the event of her mother's death, she would, apparently from a sense of duty, return and take care of her little brothers. But she is torn between her devotion to her family and her hatred of the community where she has evidently been the subject of much gossip. Her mother's illness, it may be recalled, caused her to assume much responsibility that involved actual hardship for so young a girl. We may suspect that her resentment is concealed in this repetition of her mother's illness. Of course, much may be hidden behind this idea that is connected with erotic thoughts, but the material is yet insufficient for such a conclusion. "Tumor in the womb" is another idea that may have furnished her much food for thought. At the time that she associated "mother" to "dead," her mother was quite well. Her speculation over such an event points to the persistency of this idea, the roots of which we would be compelled to seek in her earliest attitudes toward the mother. At any rate, the family lives in a town that she abhors. How may we account for the fact that "people talked and unjustly I feel, too, about everything I've done and haven't done?" The place takes on the character of the scene of her disgrace. I have lived in small towns myself and know it to be a fact that insignificant occurrences are often made the beginning of much silly and injurious gossip. But surely something must occur to initiate such an unfortunate situation as this patient describes. Why should they say that she was to become a mother? Was it all imagination on the part of the people? She bitterly denies the accusation. Apparently she is telling the truth. Did the fact that she was maligned remind her of the next fragment—the trouble with the directors when she taught school? If they "apologized before the school for what they had said," it appears likely that her character had in this case also been attacked. And this brings her thoughts to the unfortunate affair with the young man to whom she was engaged. Not only does he prove unfaithful, but in turn, tells "a great many things about me that were not true." "I don't know just what they were" is rather evasive. And when we meet persistent blocking at this point—resistance that persisted in spite of my urging—the suspicion grows stronger that all of the truth is not being told. There was a peculiar harshness of expression at this point of the analysis that was perceptibly contrasted with the former innocent attitude. The voice was changed in pitch—an observation that

is of great value in locating a complex. Evidently much affect was being repressed.

Association No. 6 was conspicuous for its long reaction time—7 seconds.

<i>Stimulus Word</i>	<i>Reaction</i>	<i>Reproduction</i>
Long	Time	X

Associations:

"Sick a long time—it won't be very long until I'm in the West. I registered and told them I hoped they would send me to France." Blocking again at this point. Her illness is here associated with an attempt to escape the difficulty of her situation by leaving the scene of trouble. Colorado occurs later in the experiment as the reaction to "luck," so this contemplated trip must have some special significance. The registration is explained as an effort to enlist for war service in the capacity of nurse. She lacks training, however, so her wish to go to France cannot be gratified at once. The thought involved, however, was so painful as to render it impossible for her to continue. We are here reminded of the traditional wish to perform some noble, self-sacrificing service as penance to atone for some mis-deed, found in many cases where a guilty conscience is a powerful driving force. On the other hand, there may be some hidden motive in this desire to go abroad. On November 13th, while discussing her history and the gloomy prospect that life held out for her, she remarked sadly: "I have been trying ever since I was a little girl, to be saved." Upon being questioned, she said: "I didn't mean it just exactly this way—I have always wanted to live right and mother has always tried to tell me what was right and get me to do that way—I united with the church at 11 years of age—knowing within myself that I trust Jesus to take care of me, forgive my sins—I began associating with girls much older"—(Blocked) She could proceed no further. The religious complex is interesting. She is making an effort to seek forgiveness for her sins through her faith in Jesus. She gropes for support, not knowing where to turn. Her mother is the teacher of right, but in spite of this training, something has gone wrong. She has evidently violated her mother's trust in her, which may form the basis of her unconscious antagonism to the mother. She was made a member of the church at 11, the year that she matured. This union with the church during the "storm and stress" period of realizing the reality of womanhood, seems highly symbolic of her reaching out to satisfy

some intense inner longing. But the symbolic union with the church and Jesus evidently met with disaster. She was over-whelmed at this point and sobbed bitterly. When this paroxysm of weeping had subsided somewhat, I told her that it was plain that she was hiding a secret that tormented her. I carefully explained that my interest in this secret was not stimulated by morbid curiosity; rather, to a sincere desire to help her solve her problem. I could not help her unless she gave me the facts, exactly represented in all detail. Further, that the effort to with-hold the secret was making her ill. I talked in this fashion for at least a half-hour and finally, after extreme urging, interrupted by an exhibition of shame and tears, she gave me the following account:

I have numbered these episodes, occurring at the ages of 12, 19 and 20, numbers 1, 2 and 3, respectively, and shall refer to them as such.

1. When she was twelve years of age, there was a boy in school, two years older. They wrote notes back and forth. She discovered that he was writing to another girl and this made her jealous. One Sunday evening, the folks went to church. She pleaded illness and remained at home. He came. After much conversation and love-making, he proposed that she "be good to him" and give him what he wanted, in return for which he promised not to have anything to do with the other girl. Besides, he told her that there was nothing wrong with what they were going to do. Evidently, his proposition was too attractive to resist, so she consented. Immediately after, he left her, and she became "terribly frightened on account of hemorrhage which lasted all night." She didn't sleep that night. She suffered much pain during coitus, but thought "the pleasure seemed greater than the pain."

2. When she was 19 years old, seven years later, she was visiting at the home of a girl friend in ———. Here she met a young man who was highly recommended. One evening, after everyone else had gone to bed, and he was ready to leave, he asked her if she was not going to "love him a little" before he left. She refused—he asked for a kiss and they sat down on the davenport. He told her that she was very passionate, and as he lifted her dress, her desire was so strong that she could not resist. She experienced an orgasm, but bled again.

3. (Claimed as the last time—about 18 months previous).

It was with Ernest, the man she hates. (In the Association test, "Ernest" was the reaction to "despise"). It happened at home.

Everyone was away. He said he was going to marry her. This time she did not experience the orgasm. Said it was impossible, owing to ovaries being removed. She hates him because he deceived her. This was the man previously mentioned, who went to a hotel with another girl.

Upon being questioned again as to the cause of the infected ovaries, she explained that she lived intimately with No. 2 for some time, became pregnant, came to ——, found a physician who agreed to abort her for \$25.00. The infection followed. In Episode No. 1, we see the child carrying on a love affair in school with a 14 year old boy, exhibiting jealousy and the keen desire to be his exclusive sweetheart. There is much craftiness in the pre-arranged visit of this boy—relying upon her ability to remain home by pleading illness. Sunday evening seemed especially propitious because no-one would be at home. This was the year that she became a member of the church, but the superficial meaning of this moral restraint is easily seen here, when it came into conflict with her erotic longings. The latter caused her to lie to her mother on the very day when the religious fear sin the most. In her mind, this temporary sacrifice of ideals was expedient in return for the privilege of receiving her company alone. The moral conflict resulting was indicated when she previously associated the forgiveness of her sins by Jesus with older girls, followed by blocking. She strove to imitate these older girls—and what could gratify this longing more completely than by having this boy visit her alone on this Sunday evening? Mother, church, and any other obligations faded into the dim distance under the brilliancy of this prospect and all that it might bring—secretly coveted. The “woman” in the child was aroused and no mere obligations could stop her. It was by means of the severe moral restraint applied by both the mother and church that “forbidden” pleasures became abnormally attractive. Such methods of training are just as useless as too great laxity, leading to the same end—self-indulgence and over-valuation of physical excitation.

It is only on this basis that we can understand the acceptance of the experience that she knew older people indulged in. She later admitted that many of her girl companions spoke openly of their sexual relations with boy friends. This is not difficult to accept when one has had the opportunity to investigate the morals of school children in rural communities. I do not wish to cast any indictment on the heads of children brought up in the country, but the situation is far different than we have been led to believe. The analyses of many patients

reveal much that is not generally known by educators and professional investigators of such conditions. In many rural communities, it is an open secret that a large number of marriages are brought about by previous sexual relations. The young man usually accepts his responsibility when the young lady informs him that she is pregnant. The morals of cities are usually made the object of attack by clergymen and moralists, pointing out the general acceptance of religion in rural districts as a restraining influence. But careful consideration of facts as related by patients in the privacy of the treatment room, would indicate that the city, with all of its flaunted vice, is a far safer place to raise children and protect them from evil associates, than in the country. Perhaps the happy medium would be the small city. But to return to the patient.

She spent a night of remorse and fright, although she retained a distinct impression of pleasure in spite of the pain. Of course, her account of severe bleeding may be exaggerated. We may be sure, however, that the incident was followed by a tremendous moral conflict. It assumes the proportions of a psychic trauma, considering her age at the time. Naturally this crisis in her life required a return to the protecting guidance of her religion. She never repeated her experience with this boy nor with anyone else during her childhood. Instead, she assumed an attitude of penance which cannot be better described than in her own words: "I have been trying ever since I was a little girl to be saved." Her mother was very religious and probably loved the church with greater fervor than her family. This was the principal point of disagreement in the home, for we are told later that the father never went to church. We can thus appreciate the mental state of the girl who felt that she had violated both the teaching of the mother and of the church. These influences made demands upon her that she had been unable to meet; these interfered with her natural but artificially exaggerated, secret desires and thus she grew to hate, unconsciously, these representatives of virtue, constantly reminding her of her own unworthiness. It is interesting to note that following this change in her life, she commenced to play the piano for the Sunday School and church services. For seven years she struggled with her erotic desires, until she "fell from grace" again, a poor victim of ignorance, false ideals and mis-directed effort.

The experience at the age of 19 is the culmination of the conflict, her efforts to sublimate her desires in religion proving too weak when confronted with an opportunity so instinctively alluring as this. Epi-

sode No. 2 may be properly estimated as an event that could have come about at any time since Episode No. 1, if sufficient pressure had been brought to bear upon her. The young man's intuition is keen when he tells her that she is "very passionate." It required just such a mode of attack to weaken her powers of resistance. Her yielding to him may be interpreted in the light of yielding to one who has penetrated her secret, beforehand—one who understands her desires in spite of protestation. Her mask is laid aside and she participates in the act fully, concluding normally with the orgasm, even though she experiences pain as before. It is probable that the hymen was not actually ruptured at the first coitus.

The relations with No. 2 continued until she was impregnated—a fact that reveals the extent of her acceptance of the situation and of him as a lover. It is remarkable, however, that she did not reveal the secret of her pregnancy to him. He remains in ignorance of this fact to the present time. She explained that she was frightened and had no thought of telling him. Her one desire was to be relieved of this sudden responsibility under any circumstances. If her condition were discovered, it is plain that she would be disgraced—a situation especially difficult when she thought of her mother whom she feared. So, having heard of a physician in ——— who had been of service to some of her girl friends, she called on him for help. The abortion was soon followed by violent pain and she was taken to the hospital, apparently for the purpose of removing the appendix. The surgeon, finding the infection, removed the ovaries and left her none the wiser. The manner in which she discovered the latter fact was previously explained.

Finally, Episode No. 3, with Ernest, throws considerable light on the mechanism of her neurosis. For, with this coitus, she failed to experience the orgasm. Now, we can understand the shock of her discovery that she was minus ovaries. As will be later reported, she knew that a woman without ovaries could not enjoy complete sexual pleasure. Her experience with Ernest proves to her that this is true. She has lost that which to her represented the acme of enjoyment. I am reminded here of a passage in Freud's "Psychopathology of Everyday Life," speaking of the over-valuation of the sexual among the Turks: "These Turks value the sexual pleasure above all else, and at sexual disturbances, merge into an utter despair which strangely contrasts with their resignation at the peril of losing their lives. One of my colleague's patients once told him: 'For you know, Sir, if that

ceases, life no longer has any charm.' " Our young lady is very much in the same situation. Not only does she hate Ernest because he proved unfaithful and failed to marry her, but Ernest is the man who demonstrated her great loss to her. Also, Ernest gossiped considerably, evidently boasting of his relations with her. It will be remembered that she previously denied this, telling me that she returned his ring, with a dramatic representation of outraged virtue. When patients evade the truth, contradictions usually arise. A careful notation of detail straightens such tangles, if patience and persistency be applied.

She admitted that the loss of her sexual feeling enraged her and that she spent nights trying to recall this feeling in phantasy. She hated the surgeon, stating that he had no right to take out her ovaries without consulting her. These phantasies and substitute efforts at sexual gratification she tried to put out of her mind, however, and worried instead, over the consciously acceptable idea that she could not bear children. We see here the repression of a painful and shameful thought and its secondary elaboration in one that did not offend the ego. She was also gratifying her hatred and desire for revenge. The unconscious striving for the lost gratification is similar to the phantasies of those who suffer from secret desires but fear the consequences of indulgence.

After this out-burst, she felt very much relieved and spent a fairly good night in restful sleep. She had unburdened her mind—had cast the problem out by putting the burden of its solution upon me. On November 17th, we undertook the discussion of various matters that would throw some light on the problem of re-adjustment and sublimation. She now gave a clear account of her earliest contact with the sexual problem, stating that sexual knowledge was imparted to her by a cousin in such a way as to greatly excite her curiosity. This led to a constant occupation with sexual matters, re-enforced by the suggestive talk of her play-mates. I pointed out to her the manner in which the sexual as an instinctive urge, was thus profaned by false association with something forbidden and evil—that this false attitude kept her attention fixed on exaggerated desires due to mis-interpretation of natural facts. She expressed a bitterness against men in general which could be easily demonstrated as a reaction to her former state of thinking of them only in erotic terms. We discussed ambivalence and found that she hid many secret desires behind expressions of the opposite. For example, when No. 2 asked her if she would not love him before he left, she refused. But, upon considering

this scene carefully, she readily discovered that she actually wished him to remain. The outcome clearly demonstrates this.

When she was convalescent at the hospital, a woman patient grew confidential and confessed that she "was through with men." This, Miss S. interpreted as meaning that the woman could not experience an orgasm again—not knowing, at the time, that she herself was likewise affected. It will be remembered that she was ignorant of this fact until informed by the surgeon six months later—the onset of the neurosis. Then, she also was now "through with men," a bitter thought—one that she could not bear to consider directly.

Further discussion, study and examination of detail demonstrated the symbolic manner in which her self-reproach and neurotic symptoms allowed her to cling to the fixed idea of sexuality, shutting out the many useful activities of life—thus representing her attempt to gain gratification in substitute form by the phantasy route. Further, that the over-valuation of the sexual feeling caused her to mourn her loss more deeply than it deserved—that there were other matters to occupy her attention that would bring her greater reward—building up a feeling of self-satisfaction and usefulness in accepting reality. She must face the pain of a slightly narrower prospect in life than she had formerly anticipated, but that the acceptance of life on the new basis would make her a better member of society than she had previously been.

She stated that she would not succumb again to the wiles of men who really had no respect for her when they approached her for such purposes. She said that she would never marry. Then followed a discussion of marriage and its object, pointing to a relationship in broader terms of companionship and devotion. Sexuality in this sense represents something more than mere physical pleasure. While the latter is not to be under-estimated, it must perforce, in this case, be given up in favor of that sublimated satisfaction to be found in living a useful life and making others happy. In any case, to have limited the marriage relationship to physical satisfaction as all-important, would have led, in the end, to unhappiness. It was not difficult to appeal to her thus, for the reason that her religious training stood us in good stead. She now accepted its tenets in the larger sense of assisting her in being a more useful member of the race, thinking in terms of the "herd-instinct," as contrasted with her former struggle with religion as a mere restraining influence. Thus, her sexual life might be satisfied if given the direction of such ambitions. Instead

of restricting satisfaction to her own individual benefit, which was of no benefit to anyone else, she could now enjoy the benefit of devoting herself to acts that were of value to others. Besides, her former life led her to hate herself—insulting her intelligence, in that she violated her moral standards. She agreed and offered the observation that she would have avoided her troubles if she had known and understood life as she now saw it.

Subsequent discussions were devoted to an understanding of her neurosis. She gradually began to see how her uneasiness represented a wish for coitus satisfaction, the converted thought being masked behind the fear of her parents, family, the church and the people she knew, whose respect she craved. Also, how her illness represented a defense in the attempt to repress the painful thoughts of her past, hurting her pride and self-respect. How sexual satisfaction had been given an interpretation in so distorted a manner that she felt she could not go on living without it. Facing the painful fact of seeing herself honestly, she could now build up a new pride, based upon actual accomplishment and real values. She now talked of going back to her home and living down the past, but thought she might be more useful and happy by entering a hospital for nurse's training. The next day she wrote to several hospitals for information. Evidently, the "herd-instinct" was now fully aroused. In regard to the former effort to enter the war-service as a nurse, she confessed that the idea back of this plan was to find a soldier with whom she had been carrying on an extended correspondence. She had never seen him—a friend having given him her name and address. So this former effort was not as altruistic as it would appear on the surface.

During the course of the analysis, several dreams were analyzed, fragments of which are interesting as throwing light on the conflict. During the first week, she reported the following dream:

"A church—I am sitting there listening to the sermon—an open door—I can't remember the rest."

Associations:

A church. "The church at home—I was pianist there for several years—had a minister there who left a few years ago—I heard recently that he had stopped preaching and was now a drunkard—he tore the church to pieces—expelled most of the members—later they were brought back into the church—now they have a new minister—while I was home they had revival services—I attended several meetings—I recall the testimony given at these meetings—mamma and

papa were gone while I was home—they had a dandy trip through the South—I missed mother going to church because she never fails to. go—papa never goes.”

We see here the conflict, represented by a church, a struggle which began in her earliest childhood. On the one hand, an intensely religious mother and on the other hand, a father who never went to church. In their home it was considered a sin to neglect the church services. “Papa never goes” places him in the category of the sinful. On the basis of her instinctive love for him, the sinful becomes attractive, notwithstanding the mother influence. Family influences in this patient’s childhood produced an unsettled condition of mixed ideals. Her parents disagreed over the church. The child was torn between her natural love for her father (associated with “sin” and “evil”) and the respect for religion as represented by the mother. The history shows that instinct won the battle. Consciously she struggled against “sin” and “wanted to be saved.” Unconsciously she was attracted by, and impelled in the direction of forbidden gratification. Sexual craving was over-stimulated and exaggerated by this conflict—too severe a restraint and too little understanding. When sex becomes “sin,” every normal sexual impulse will be received with psychic resistance that keeps the attention riveted to it more than it deserves. The direct outlet being denied, it will then seek its gratification in substitute actions—neurotic symptoms.

The church at home—represents at the same time her longing for deliverance and her hatred of restraint. “*I was pianist there for several years*”—her efforts to enter closer service in the church as an act of penance for her childhood affair, No. 1.

A minister there who left a few years ago—I heard recently that he had stopped preaching and was now a drunkard—Unconscious satisfaction in thinking of one, like herself, closely allied with the church, who could also commit an “unpardonable sin.” Misery loves company.

*He tore the church to pieces—expelled most of the members—*Revenge—these self-satisfied virtuous people who assailed her character are pictured in a humiliating position.

*Later they were brought back into the church—*Restoration and the old order again—duty asserts itself.

*Now they have a new minister—*Destructive forces have been put down and “good” conquers “evil.”

*They had revival services—I attended several meetings—I recall the testimony given at these meetings—*The need for confession and

return to the bosom of the protecting church. Jung would see here the symbolization of the mother and re-birth phantasy as the tendency of the libido.

Mamma and papa were gone while I was at home—this thought following might be interpreted again as the church in its relationship to parenthood. She feels lonesome and goes to church for solace and relief. To stay at home might remind her too forcibly of the "sin" weighing heavily upon her.

I missed mother going to church because she never fails to go—The voice of duty again. She misses mother and thus approves of the church and her mother's devotion to religion. Virtue is now controlling her and she speaks with regret: "Papa never goes."

Thus we see that "church" is to her a symbol of conscious love and unconscious hate. It represents her terrific ethical struggle to overcome her instinctive longings which her training branded as "sinful."

"Sitting there listening to the sermon."

Associations:

"Minister at home—he has a splendid voice—sings beautifully—visits at our home a great deal on Sundays—his sermon last Sunday night especially impressed me. His text was: 'Confess your sins before men, and I will also confess you before our Father, which is in Heaven.'"

Again the need for confession. She admires the minister, his singing arousing her enthusiasm, stirring at the same time, erotic thoughts and awe of him as a representative of authority—the church. The text calls to her to abandon her degrading longings and have the Christ plead for her before God, with the assurance that she will be forgiven. Psychologically, we may see here a longing to return to the father, the source of existence, her first love—the symbolic regression to the incest level—to the birth phantasy. This mechanism has been often pointed out in religious ecstasy—an observation that may account, in a measure, for the conflict that usually accompanies such fanaticism. It is the struggle alluded to by Trigant Burrow in his article, "The Origin of the Incest-awe," (*Psychoanalytic Review*, Vol. 5, No. 3). He writes: "Thus there is no incest but thinking makes it so. I have said that nature abhors consciousness. I may add that nature will not tolerate the encroachment of consciousness within the sphere of that primary, affective pre-conscious, which pertains to the original subjective unity and identity of the organism with the maternal life-

source." Our patient feels the visionary "new" life as a reflection of the old, minus her sins. She identifies herself with her mother as religious enthusiast and goes to meet the father, purified of all wrongdoing, represented by Christ. It is the phantasy-route of the dreamer who runs from reality. However, this regression is contrary to progress in the external world of reality and arouses a feeling of resistance that seeks exit through what she pictures in her dream as "an open door." She must escape—not only to gratify the progressive urge of her sexuality, but to give expression to the false ideas that became associated with this sexual urge, i. e., the erotic self-gratification as distinguished from procreation and love toward others.

An open door.

Associations:

"Doors at home—folding doors between living room and dining-room—open all the time—going home to-morrow—(sigh of regret).

The open door of the church is thus connected with thoughts of the doors at home. Church and home are synonymous. She must escape them both as symbols of restraint in order to satisfy the desires that torment her.

Thus the dream represents the conflict that lies back of her symptoms. She cannot fully accept either road—hence the neurosis. Her conception of religion made it impossible to resolve the conflict in this direction because it served an infantile, regressive tendency. Her renunciation of the church was impossible because her exaggerated sexuality caused her to long for protection and social security. The analysis provided her with the opportunity for confession without bringing public disgrace upon her, teaching her at the same time that service to those about her fulfilled the true religious ideal. Sexuality was renewed in the light of the love-life and thus lost its stress and consequent over-valuation.

Several other dreams were utilized in working out the analysis, freeing her of the affect-laden ideas. Dreams of fire were frequent. Some of her associations to "fire" further demonstrate the mechanism of her emotional disturbance.

Associations: "Every fire I can recall, happened at a time when we were having revival services at one or the other churches in town"—associating the idea of destruction with that of revival—the "saving of souls."

"One of our neighbor women was burned to death—I saw them put the fire out on her body. Must be terrible to burn to death—that

woman, (expression of horror) I really don't believe that she knew how she suffered." (Shuddered). Superstitious fear of punishment by hell-fire, the religious complex. Unconscious sadistic thought, associating the burning body, torture, etc., with another fire that tormented her. This analysis was completed in one month, the shortest period that I have spent on a case brought to completion. I have not duplicated this record since—most of the cases requiring two to six months and more to bring about such results as were here accomplished.

Her symptoms cleared up—she began to enjoy normal sleep; ambition and satisfaction returned. I heard from her last year. She was living at home, helping her father in his store, apparently content.

A CRITIQUE OF A CRITICISM

BEING A REPLY TO
"BEHAVIOR, AN EXPERIMENT IN SOCIAL PSYCHOLOGY"¹

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I SHALL not assume to contradict Dr. Allport in his main thesis. I intend to stoop to minute pecking at individual morsels of his nutritive article and to teize rather than to hammer. My aim will be apparent from my conclusions.

In the author's second paragraph he announces that "the group is not an elementary fact." To put it very politely, this is perhaps begging the question. There is a good deal of doubt in the minds of most of us as to what constitutes elementaryism, laying aside the question of what constitutes fact, which has puzzled many before and since Pilate. Dr. Allport sets out to prove that "analysis must go beyond . . . behavior of individuals of which the group is composed," and he sets out to prove it by declaring it to be a fact. The point made by the "herd psychologists," if they will accept so bovine an appellation, is that the group does constitute a unit which acts as a unit and must be studied as a unit. They insist, and Dr. Allport does not disprove, that the resultant of the actions of a group of individuals as such is not a process of addition nor yet a process of multiplication, but one of integration.

Lest this smack too much of mathematics we turn hastily to the third paragraph and object at once to the criticism of Dr. Voobert's term (not phrase), "polarization." Dr. Allport's mistake in thinking that such a term "neglects" the note of individual response lies in his failure to recognize that polarization is not "merely the sum" of individual responses, with or without "inter-individual adjustments" because polarization is not a sum at all, but a tendency. Now, a tendency cannot be said to neglect something with which it is not in any way concerned any more than the fact that iron has a tendency to be attracted by the north magnetic pole concerns in any way the strength of bridge girders.

Dr. Allport proceeds to demolish the theory of the unity of the

¹Floyd H. Allport—*Journal of Abnormal Psychology*, Dec., 1919, Vol. 14, No. 5.

group (in the third paragraph) by declaring it to be, from the psychologist's standpoint "accidental." Now of course there is a whole school of philosophy (Tychism) based on the theory that everything in the world is "accidental," from the arrangement of watermelon seeds to the sum of two and two equaling four; and again, there is a school of philosophy which maintains that nothing is "accidental," not even the lap of the ocean waves or the shape of an individual grain of sand. One need not declare for either extreme and yet see the fallacy of attacking the unity of something by calling it an accident. One is a little surprised that Dr. Allport would fall into this puerility. One is the more surprised that he should speak seriously of the "appearance but not the reality of the unit" as if any of us knew what the reality of the unit really is in any connection. But assuming that it is an important question one must become philosophical rather than psychological, and one can maintain that anything which possesses a single name must possess certain other attributes of singleness, however much multiformity or pluralism may be revealed by a study of the details.

Consequently I think we can hardly bear being accused of having "forgotten" the "neuromotor system of the individual" as the starting place or the locus of psychology, but it is something of a question as to whether it is the locus of all psychology, individual or social. Once more the writer is begging the question, nor can we sit easily by and let go by unchallenged the "new adage for old," "If we take care of the individuals the groups will take care of themselves." A good deal depends upon what one means by "taking care." It certainly does not follow that the study of the individual will reveal all the traits of the group any more than one could prophesy a glacier from a snowflake.

For the next few paragraphs Dr. Allport proceeds to reiterate his statements and then steps into the dangerous shoals of definition. "Self," he declares, "consists not in reflection but in an adjustment of the organism to the inanimate and social sphere in which it moves." This is a simple solution for an age long problem. A river, the atmosphere, a tapeworm, and various other forms of the Lord's creations are capable of such adjustment, and even if the author means the capacity for this adjustment he does not give us a definition which would be very widely accepted philosophically.

(And here I feel very much like a carping critic, for what Dr. Allport has been brave enough to do I think many of us would be too timid to assay, and he has at least made the effort. Perhaps it is better to fan out than to get a base on balls).

Dr. Allport's conception of a social stimulus affords an exceedingly interesting study of Dr. Allport. If he sits down to a meal in solitude he "responds to the food as a non-social stimulus." If, however, he were "a cat watching the movements of a mouse" . . . he would be "reacting to a social stimulus." Can this be a misprint? Because civilization has separated the meal from the abbatoir by a few miles and a few pounds of ice while the cat performs the function of butcher as well as diner, is there, after all, so much difference? Does it require the muscular contractions of a cat to bring about a social stimulus which the bouquet on the table, the handily carved silver, the polished table, even the smiling solace of the lucid windows fail altogether to supply to our individualistic Doctor Allport? Why should a cat be thought more social than a book or a dish, or even a toothpick, and why should the mouse seem more social to the cat than the beefsteak to our Doctor?

And then, to go on, Dr. Allport tells us with some elation of the "fine adjustment of action of a hermit crab securing its prey not to be found in any of the reactions of the group except those evoked by animated behavior," using this to illustrate still further social stimuli. He might have made an effective analysis of this point by consideration of the social psychology of the fly trap species of orchids which snap down upon insects when they alight and digest them at leisure.

There is nothing to all this except a certain interesting psychology of psychologists, certain interesting polemics and dialectics. Oh, for a philosophical classification of all psychologists! Those of one-ness, those of two-ness, those of three-ness! (apologies, Charles S. Peirce). Could we but hit upon a satisfactory classification of temperaments, or even to pigeon-hole them as individualists, pluralists, necessitarians, parallelists, and the like, we might have a valuable rule of thumb for the interpretation of their essays. Thus we might then understand *a priori* why Dr. Allport vigorously but ineffectively attacks "herd psychology" and why I humbly attack his attack, with probably no more vital interest in defense of social psychology than his in the attack thereon. One might go so far as to show that if this author is a pluralistic individualist, that such are by rule (?) weak in theory and strong in practice, (i. e., hypognosic and hyperbolic) and hence this article is a true introspective (?) revelation of this psychologist. What with the growth of introspection and analyses of mind and all, and thereto also the clamor of Allport's round the world, it seems assured that cometh now the science of the psychology of psychologists. Even they have minds and moods! *Absit invidia.*

Perhaps it is all a distinction between pluralistic individualists and individualistic monists, and perhaps there is no distinction at all. Such a study might really contribute to social psychology.

REVIEWS

THE PSYCHOLOGY OF ANTICIPATION AND OF DREAMS. By Frederick Peterson, M. D., New York City. Reprinted from Contributions to Medical and Biological Research, Dedicated to Sir William Osler, in Honour of His Seventieth Birthday, July 12, 1919, by his Pupils and Co-Workers. New York. Paul B. Hoeber [1920]. Pp. 8.

THIS is a clear statement of part of the reaction, so inevitable, and more and more fashionable, from the categorial over-elaboration of the subconscious aspects of mind contributed and applied by Sigmund Freud. It represents the ancient Greek wisdom of "Nothing too much," the golden mean, the inevitable catharsis of a fixed idea, the cure of a constructive paranoia. Peterson voices the common belief that Freudism at its worst goes too far, that the great explorer of "the" subconscious discovered more than was there. Almost every scientific explorer in the realms of mind does this; if he does not, we never hear of his work and a part of its value therefore is lost. Oftentimes the bare actual truth is too bare to attract notice. "A foolish consistency" (says the wise-man of Concord) "is the hobgoblin of little minds, adored by little Statesmen and philosophers and divines. With consistency a great soul has simply nothing to do." Freud didn't see this, and tried to be consistent—and a bit sensational.

"The essential function of the mind is its dealing with the future. Anticipation of the future is the light that guides our conduct, which plans and chooses ———," etc. Education should be of this nature. "We have need now of a new study of the psychology of anticipation." "We might perhaps compare the mind to a fountain pen filled with experience, with its point of the present poised and ready to write upon the white tablet of the future."

Freud's children dreamed dreams that obviously were wish-fulfillments; here was "a saltatory idea that took complete possession of him [Freud], and before long he announced in a book the hypothesis that all dreams are the fulfillment of a wish."

"The extraordinary symbolism ascribed to dream-life by the 'new psychology' is chiefly the invention of the psychoanalysts. * * * There is more to be learned from the interpretation published of the psychology of the analyst than of the psychology of the dreamer." (Hear, hear!)

To the Freudian (continues Professor Peterson) "there is but one drive, the sexual, and to him all the arts and accomplishments of civilization are but the sublimation of that. This is a Rabelaisian theory." * * * In reality there are many powerful drives besides those of sex and hunger. * * * Individual development is one long series of 'preparatory' or anticipatory reactions for the 'consummatory' reactions that are to follow. It would seem as though sex and hunger play a secondary part in the behavior of mankind in general." Sic transit gloria Vindobonae!

But psychology always must be grateful to Freud for interesting its over-numerous ultra-conservatives in the subconscious aspects of mind. And then again, really it is striking how frequently "the subconscious," never trivial and never pretending, expresses itself in dreams well worth the study of the biological psychologist. Freudism calls attention anew, moreover, to the wonderful system of pretense that is conventionalized in culture: "*Let's play we are not animals.*"

None the less, Professor Peterson's brochure is a timely and a wholesome expression of a growing belief.

GEORGE V. N. DEARBORN.

THE ILA-SPEAKING PEOPLES OF NORTHERN RHODESIA. By the Rev. Edwin W. Smith (Honorary chaplain to the Forces, Fellow of the Royal Anthropological Institute, etc.,) and Captain Andrew Murray Dale, (Magistrate in the British South Africa Company's Administration.) London: MacMillan and Co., 1920. Two volumes, pp. xxvii, 423, and xiv, 433. About 180 illustrations and maps.

THIS WORK, just off the press, undoubtedly is one of the most complete descriptions of the nature and the life, physical, mental, and social, of a tribe of primitive man ever published; it is the world's largest contribution thus far to the psychology of the savage's mind, (although less analytic than the small but important contribution of Professor Franz Boas of Columbia: "The Mind of Primitive Man"). It is the ethnography of an isolated savage race, (the Mashukulumbwe, living along the Kufue River (a branch of the Zambesi) for 150 miles) written in the truly scientific spirit, after what must have been an enormous amount of conversational enquiry. There is scarcely a branch of human biology that will not here find first-hand and novel data for its use; e. g., dietetics.

There are thirty-eight chapters: The environment; history; physical characteristics, dress and decoration; building operations and village-life; domestic animals; agriculture, food, narcotics; hunting and fishing; warfare; various handicraft; leechcraft (Ba-Ila ideas of anatomy and physiology, medicines, diseases and remedies, the cause of disease, snake-bites, etc., the use of apbrodisaics, etc., amulets and talismans, the diviner, the doctor—72 pages); social organization; terms of relationship; regulation of the communal life; etiquette; the rights of property; slavery; the regard for life; from birth to puberty; the relations of the sexes; dynamism; the doctrine of souls; the divinities; the Supreme Being, Leza; miscellaneous notions (reckoning time, ideas about the world, ideas about the animals and plants, the bakamipilwi (flying people), ideas of colour, ideas of number); the Ba-Ila at play; the Ila language; proverbs, riddles, and conundrums; and folk-tales. Index. The illustrations are both of extraordinary interest and of great technical merit.

The long and detailed chapter on the relations of the sexes interests the clinical psychologist partly because it shows how much sex means to animal mind camouflaged in humanity, savage or cultured. "We were speaking to a chief

once about sending his sons to school, and his reply was, 'I want them to go, but they are adolescent (jam testiculos habent) and won't leave the women to go to school.' They were lads of twelve to fourteen years of age. At the other end of life, the commonest request made to us by the old men is for apbrodisaics." "To them, the union of the sexes is on the same plane as eating and drinking, to be indulged in without stint on every possible occasion." (One would like to know as to the relative number of neurones in their (inhibitory) neopalliums compared with those in a restrained man cultured and virile with habitual self-control; would Sigmund Freud expect to find the number equal?)

In this *Journal* the psychological chapters would probably have the greatest interest, although that on leechcraft would appeal to many readers, and would make a long interesting article for any medical periodical,—so different would it be, somehow, from the "run" of modern medical reports! Rather so, as witness that portion devoted to diseases of the nervous system: "*Impolokoso*, earache, said to be caused by the *bashimpulukutwi* [well calculated to give one an "ear-ache," certainly], the creature dwelling in the ear that lends it its hearing. Treatment: cook the roots of the Kamakamala shrub, and pour the decoction into the ears. *Shibandilwabana*, epilepsy in children. The chinao, one of the small Felidae, is given this long name which means 'he-that-is-not-to-be-spoken-of-before-children.' This animal is said to be 'owner' of the disease, as every month when the moon is dark it falls into fits. At the same time those with this disease will behave in the same way. If you kill and touch a chinao and then embrace your child, it will get the disease. For the same reason you must avoid going amongst children when you are wearing the chinao's skin. And if a child treads where a chinao has passed, especially where it has micturated, it will get the disease. If the child names the animal, or anyone names it in the child's hearing, *ishina dilenjila* ('the name will enter') and the child will get fits. * * * *Kalalu*, lunacy. It is said that some lunatics have a great disinclination to light-colored people; to see them makes them furious. * * * *Mupuka*, convulsions in young sucking children; supposed to be caused by recondite *mupuka* coming from the mother's breast. * * * *Lushinga*, toothache, neuralgia. *Inshikila*, hic-cough. * * *

Mafubikila: these are sores made intentionally upon themselves by children. The youngsters take a piece of cotton, and after moistening a spot on the arm, light the cotton and put it burning on the place. This is done again and again all up the arm. They do this because they are told that if they do not, when they die Leza [the Supreme Being] will give them flies to eat and nothing more. Children will in play count up these scars saying "This is mine * * * this is Leza's; the last is Leza's wife. After burning the places they put lizard's dung on to heal the wounds. [How much of our pain do they suffer?].

The Ba-Ila anatomy and physiology are extremely interesting. They have a hundred or more names for as many parts of the body. Of the functions of the internal organs they are almost entirely ignorant. The parts they assign to

the viscera are psychical rather than physiological, i. e., they regard them more as the seats of emotions than of vital processes. This does not, however, apply to all.

The chapter on dynamism starts out with an appropriate if trite remark: "We now enter upon a part of our subject the interest and importance of which are only equalled by its difficulty." "Behind all the actions and customs of the people lies their conception of the unseen. * * * They are more concerned with the invisible than with the visible. * * * They are religious," though not believing in a personal God, but rather in some all-pervading and ever-acting force, comparable in our civilized mental world with an electricity charging all things. Ordinarily things are neutrally charged or at least insulated, and the force may be turned to use either good or bad. To be in close connection with it is to be *tonda*, taboo. There is no formulation of this belief by themselves, however, "it is rather the result of an emotional response to their environment,—a world which, to them as to us, is a thing of mystery."

Witchcraft is very prevalent among the Ba-Ila, but seems to differ in no essential respects from that which caused so many thousand cruel deaths among our own ancestors in Europe only a few centuries ago (see Scott's "Discoverie of Witchcraft," 1584).

"There is no doubt in our minds that the Ba-Ila believe implicitly in the survival of personality after death. They state this without reserve, and, as we shall see, seek to come into communion with the departed." The living worship and reverence the dead, and the dead are dependent on the living for their happiness.

"The Ba-Ila are firm believers in the doctrine of metempsychosis. * * * The person does not enter into an already existing animal, but becomes an animal. The animal is not born, it simply develops out of the worm. The ghost of the man has already taken its course, gone to the east, or taken up its abode near the grave."

Of ghosts, these people believe in five or six kinds at least: divinities, elves, evil spirits, the slaves of witches, ghosts of particularly brave men, and ghosts that are silent.

The dream-world is as real to the Ba-Ila as that of the waking consciousness. They interpret dreams with sundry "signs" nearly as irrational as those of the people of a great American or European city! but Freudism is still unrevealed to them.

Spirit-possession and reincarnation are firmly-fixed beliefs. There is transient possession, such for example, as causes one to murder a fellow-man and the remorse therefor is caused by the ghost of the victim. Illness is a temporary possession. Some people are intermittently possessed, demoniacs, and these may pass on into others, whom we might term "mediums" or "prophets," the latter playing an important part in Ba-Ila life.

"The Ba-Ila seem to think that a certain number of spirits were created at

the beginning and given bodies: when the bodies wear out or are destroyed, the ghosts live for a short time free and then have other bodies prepared for them. They seem to regard this as the best of all possible worlds, for the disembodied spirits clamor to be reborn." Ghosts are sexless, above sex in fact, entering male or female bodies indiscriminately,—each a lodger in the body for the span of the latter's life. There is therefore no morality in their ideas of reincarnation, in this way differing greatly from the notions of the Brahmas and the Buddhists: the Ba-Ila know no Karma attained by denial of the will-to-life.

The guardian spirit so universally believed in by these Rhodesians reminds Messrs. Smith and Wade of the conception of the subliminal consciousness of modern psychology—a secondary self, more sensitive than the primary, a monitor too, of behavior, like the daemon of Socrates, the oversoul of Emerson. "In this strange conception [of oneself which yet is not oneself] which yet explains so much, the Central African savage and the European (and American) psychologist once again clasp hands."

The "man is full of soul-stuff just as the world of Nature is pervaded by those mysterious forces manifest in medicines, etc.; this soul-stuff pervades the whole body but is especially active in some organs—in the blood, heart, genitals. It is also especially prominent in the senses of taste and hearing, so much so that there the soul-stuff appears to become a self-acting distinct personality. This soul-stuff is ethereal, impersonal, animating the whole body, giving it life. The essence of it may, with the aid of drugs, be separated from the body and be hidden for safety as an 'external soul' in other things. Into the body comes the spirit-world, which gives the person his identity, his name, his position, all that we mean by personality.

At death the man *wasanguka*, becomes metamorphosed. The spirit is freed from the body and enters the unknown spirit world, where it awaits the time of its reincarnation. The 'soul' of the man now changes, it is no longer mere 'stuff' but a person—a *musangushi*—which hovers around the grave, lives in trees and houses. This is the normal process; but it may be disturbed by the action of the mysterious force in *musamo* (medicine), by taking which a man extracts an essence from his body which transforms into an animal. So that the one person now becomes three distinct entities. On the other hand, a magician may, by means of his art and medicine, destroy the spirit entirely, so that it cannot be reincarnated, and the soul-stuff, instead of becoming a *musangushi* is transformed into a malevolent *chizwa*. Between the body mouldering in the grave and the spirit no connection exists after death, but until the process of decay is complete, the *musangushi*, as well as the *chizwa*, remains in some way attached to the body so that to destroy the body is to destroy the *chizwa*."

The chapters on the personal divinities and on Leza the Supreme Being, we may not linger over, although full of their kind of psychology. The description of miscellaneous notions is extremely interesting, but not summarizable. "Kumbulawayo ("at Bulawayo") is the Ultima Thule of most Ba-Ila, and they think

all white people come from there. When European traders and hunters began to visit the Bwila, we were solemnly asked whether Bulawayo was being deserted. * * * They suppose that all European merchandise is thrown up out of the big water by monsters—some think they are men who have been transformed by the magic of white men to work for them under the sea—and traders pick it off the shore and sell it."

There is much conceptual psychology in Mr. Smith's chapter on the Ila language; but it is too technical for present discussion. This author has written a handbook of the language, and was the chief translator of the New Testament into Ila. He characterizes the languages as one "of extraordinary richness and flexibility, a fine instrument. One is surprised that the Ba-Ila should have such a fine instrument; it has potentialities far beyond their need of expression hitherto."

Such an ethnographic report, when done so scientifically and with so great a wealth of detail in all directions as is this one, has a particular interest and even a potential value for the psychiatrist and the "psychopathologist" in that it demonstrates anew the unity of mind, the practical identity everywhere of human mind especially. This is worth while and not so much because it orients and explains the mental and physical processes of cannibals and of head-hunters, but more because it reveals in a new way the wonderful pretense-system, the highly artistic and scientific camouflage-scheme of our "highest" civilization and culture. For, as James Thomson says,

"—— a cold rage seizes one at whites
To show the bitter old and wrinkled truth
Stripped naked of all vesture that beguiles,
False dreams, false hopes, false masks and modes of youth;
Because it gives some sense of power and passion
In helpless impotence to try to fashion
Our woe in living words how e'er uncouth,"

—"woe" from the viewpoint of them who trusts so implicitly to the supposed apotheosis of "cultured" mankind. It is the very heart of Our Great Adventure finally to "attain," so demonstrating that civilization really has furthered the progress of creative evolution.

Captain Andrew Dale, one of the authors of this work, died of blackwater fever at Mumbwa, Northern Rhodesia, on Mayday, 1919. "He did not live to see a line of our book in type. It was as a crippled and broken man, without a regret, that, after heroic suffering, he returned to Africa and reentered the British South Africa Company's service in the hope of setting free a younger and more active man for military duty. * * * Happy Britain to have such sons as he to represent her among the backward races! E. W. S."

This treatise is the result of thirteen years of deliberate, careful study on the part of two scientific men already familiar with African humanity.

The present review humbly urges that comprehensive and detailed discussions, such as this interesting work by Messrs. Smith and Dale, of a foreign, distinct and unified mode of life and of thought, have far more to offer to modern science, especially psychology, normal and abnormal, than the little use so far made of them would imply. As we admit more and more the universal qualitative identity of mind, this usefulness of ethnographic data will surely appear, and be acted on. The keen constructive imagination will see in the present treatise, for example, an important base-line, or "control" from which conceptualization and, though (far removed from this) the elementary human attitude toward sexuality might be studied, perhaps with unexpected success; item, dietetics; item, perhaps, suggestive therapeutics; item, the base-relationship between humanity and its physiographic environment. Even psychology gets into ruts.

GEORGE V. N. DEARBORN.

METHODS AND RESULTS OF TREATING SCHOOL CHILDREN. By Evelyn Dewey, Emily Child and Beardsley Ruml. E. P. Dutton & Co., 681, Fifth Ave., 1920.

THIS BOOK ranks as a welcome addition to the armamentarium of lay examiners relying on tests of intelligence in the determination of intellectual status of school children. Effort has been skilfully and consistently applied to determine the relative values of the tests selected, and to delineate the methods of application, the method of scoring and the mathematical treatment of scores. The limitations of certain tests are pointed out and the fact that not all reactions are susceptible of numerical scoring is made plain. The results indicated in the title allude to conclusions drawn from the use and treatment of the tests selected and to tabulated classifications of the group; but not to an expression of individual standing. No illustrative individual scores are given. These were reserved with correlations of such to school procedure for another audience, together with recommendations of adaptations and modifications.

Since the field of this pioneer study emphasizes the canvassing of methods of mental examination of groups of school children by the application of selected intelligence tests with reference to usefulness to other examiners and negative conclusions as well as the positive are of value; subsequent testers may elect whether to ignore the observation of physical stigmata and peculiarities altogether or seek a method of correlating appropriate data therefrom with that pertaining more directly to intellectuality. Our authors have made clear the difficulty of realizing the latter desideratum by their careful exclusions in the selection of tests and formulae. They have ventured outside the field of intelligence testing only in the direction of observing physical factors.

Attempts to evaluate so complex a mechanism as mentality or even the circumscribed field of intellectuality by any series of numerically scored tests

must always encounter limitations. Independently tested intelligence functions are actually more or less interdependent or blended in action. There is possibly a wider range of mental reactions to be tested and scored.

By those whose problem it is to evaluate personality, physical and mental, stigmata and symptoms of disease as well as characterial dispositions and deviations must also be observed. This opens a very wide and fascinating field in which appropriate tests still remain to be devised—if, indeed, the standardized testing route be the avenue of approach. The contribution made is a distinct and valuable addition in its own field of intelligence testing and is a clarifying step to the delimitation of the problems of the intelligence tester on the one hand from those of the personality evaluator on the other.

G. G. FERNALD.

MENTAL SELF-HELP. By Edwin L. Ash, M. D., B. S., M. R. C. S., Author of "The Problem of Nervous Breakdown." New York: The Macmillan Company, 1920. Pp. v, 119.

This little book suggests for once the "Christian Science" of a scientific London medical man, — far enough away to get only the best part of this much-litigated system.

Those who wish their sustaining and stimulating soul-nourishment in this predigested form, will find the volume at least as useful as another, for, as the cover-advertisement says,

"The object of this little book is to summarize in a practical way reasonable methods of obtaining self-help through the exercise of our own mental powers. No encouragement is given to the claims of self-help systems that run counter to common sense and daily experience. Throughout it is shown how the right place of methods of mental and spiritual self-help is by the side of routine medical or surgical measures, and that under no circumstances should they be used in opposition to or in place of the latter."

As the present reviewer has long insisted to his students, "Christian Science" made scientific would be the strongest therapeutic system that mental prophylaxis and treatment have ever had. The road to that high vantage-point sometime or other will be worked through. The present author, Doctor Ash, has set out; will the simple-minded followers of the late Mrs. Glover-Patterson-Eddy let him go alone?

His chapters deal with "self-help in sickness"; the "foundations of health"; "mind and health"; self-control: and how we waste our energies through lack of it"; "self-suggestion in theory"; "self-suggestion in practice", and with "right and wrong thinking." Then come some forty-four notes that pretend to be "conclusions"; and finally "Some Exercises to Improve Attentive Control (Concentration)," which imply that the author does not tend to overestimate the mental grade of his expected readers—"expire steadily through the nostrils, mentally counting eight—" etc., etc., till one almost sees just the type of women and of men who will do it.

GEORGE V. N. DEARBORN.

RATIONAL SEX ETHICS: FURTHER INVESTIGATIONS. A more Intensive Study of Sex Histories, Case Histories, and Dreams, with Therapeutic Suggestions, and Philosophical Deductions. By W. F. Robie, M. D., M. R. C., Superintendent Pine Terrace, Baldwinville, Mass. Boston: Richard G. Badger, 1919. Pp. 330.

THIS VOLUME completes the systematic discussion of Doctor Robie's brave ideas toward public education in sexual hygiene. The present reviewer believes that he is right in urging the expediency of allowing the average mind to keep about its work by the reasonable relief of the stress of instinctive sexual desire. The master of biological philosophy, Herbert Spencer, puts it as well and certainly as unbiasedly as any one could: "That the physiological effects of a completely celibate life on either sex are to some extent injurious, seems an almost necessary implication of the natural condition, but whether or not there be disagreement on this point, there can be none respecting the effects of a celibate life as mentally injurious." Since Spencer wrote this, endocrinology has explained the matter so that it is no longer scientifically debatable outside of propaganda.

A previous reviewer has stated a fair impression of the work in the following acceptable terms:

"In the present flood of literature on sex topics, it is refreshing to find an author who writes from the point of view of the general practitioner and who has endeavored to secure his material from normal persons rather than from the abnormal, the eccentric or the criminal classes. Dr. Robie seeks to discuss some of the perplexing problems of sex relations in a common sense way without obscuring his meaning by the complex terminology and fantastic theories of many writers in this field. He is even able to discuss psychoanalysis dispassionately and, without going to the extremes of the Freudian enthusiasts, to recognize the value of many of Freud's theories. The numerous case histories given are well selected as illustrations, and in many cases will be recognized as analogous to those encountered by most practicing physicians."

There are chapters on psychoanalysis and society; the case of N—; a case of hysteria; introduction to sex and case histories; case histories; sex histories; birth control; mistakes of a physician; incidental observations; and an incipient philosophy. Seven topics are discussed in the sixty-two page appendix.

Complex and difficult, and sometimes seemingly inconsistent, is the path to "right-living" among human beings, and necessarily is it so because of the fifty million years of hereditary unrestraint in the brutes which the half million years of humanity (restraint) has as yet not been able to countervail. But this is The Great Adventure!

GEORGE V. N. DEARBORN.

SANITY IN SEX. By William J. Fielding. New York: Dodd, Mead & Co., 1920. Pp. xvii, 333.

The term "fig-leaf morality," and its capital exposé, are the outstanding feature of this volume—one of the yards-long "shelf" of books on which more or less the public is waxing wise (in sex-hygiene) and the publishers—fat, yes,

obese! It is not, however, a volume dealing solely with the personal and conjugal problems of sex; its value lies mostly in its interesting statement of the various phases of the great problem in society, e. g., the Government's campaign in sex-education; sex-hygiene in industry and in the schools; its relation to prostitution; and to the "movie" screen, as well as to the pulpit. It is well explained how readily sexual ignorance becomes sometimes the only cause of marital discord and of divorce. Birth-control is wisely discussed: "It must be admitted that birth-control is one of the great moral and ethical forces of the present age." The author has prejudices of his own, however—or perhaps he's only a "socialist?"—for on page 239 he declares that the moral code has changed so much that today "it is possible for even a banker [can this be a misprint for baker?] to be a leading member of the community."

There the inevitable chapter on psychoanalysis, and a final one on certain of the economic bases of sex-hygiene. There's a bully little seventeen-page bibliography, and an excellent index.

This book is a very useful one, then, and besides, it has a vision: "we have now," it says, "broken away from the miasmatic quagmire of Prudery and Silence, and are at last on the highroad approaching sanity in sex." Aesculapias grant that the "highroad" prove not to be a long, long trail awinding through an unwholesome desert of dogmatic prejudice seeking only its own selfish good!

GEORGE V. N. DEARBORN.

NOTES

L'ANNEE PSYCHOLOGIQUE

We are glad to be able to announce the reappearance of *L'Année Psychologique*, edited by Henri Piéron, Director of the Psycho-physiological Laboratory of the Sorbonne. The publication of this important yearly volume was, as the editor informs the public, interrupted by the War from 1914 to 1919. The present twenty-first volume of 522 pages just issued (Masson et Cie, publishers) covers the gap of this period.

According to the announcement of the editor it contains reports of all the important work done during these six years and published in the allied and neutral countries. The field covered includes, for example, the researches in applied psychology relating to the selection of men for special services, and which, in the course of the war, determined the choice of military aviators in almost all the armies and the general assignment of men according to their aptitudes in the American army. It also includes published researches relating to the evaluation of mental efficiency, to the measurement of fatigue, to the arrangement of work, etc. In the domain of pathological psychology the results of the immense experience gained in the war are included in the form of complete and critical reports. The fields of animal psychology, of physiological and psychological processes involved in mental activities, and various other subjects are, as formerly, covered. In short, *l'Année Psychologique* undertakes to embrace in its abstracts and critical reviews of about 600 publications, the literature of the whole field of psychology and, besides, contains original articles on special subjects.

Among the names of those contributing original articles are the well known ones of Mm. Bourdon, Foucault, Rabaud, etc.

An annual volume of this sort, well edited as it is by M. Henri Piéron, will prove invaluable to all those engaged in original work or interested in psychology and allied subjects, whether philosophy, physiology, or medicine. That this important volume should now make its reappearance will be a satisfaction to all those engaged in psychological work and we extend our congratulations to the editor for his part in its publication.

AN INSTITUTE OF PSYCHOLOGY AT THE UNIVERSITY OF PARIS

The University of Paris has established an *Institute of Psychology* to be administered by a board of directors composed of the following five professors of the Institute: H. Delacroix, G. Dumas, P. Janet, H. Piéron, Et. Rabaud; and of the deans of the Faculties of Letters and Sciences, Professors Brunot and Fr. Houssay.

The Institute will provide theoretical and practical instruction in general, physiological, experimental, pathological and comparative psychology. The Institute of Pedagogy, which was founded last year as a department of the Faculty of Letters, will become the Pedagogical Section of the Institute of Psychology. Similarly two other sections on applied psychology will be formed.

The title of "Eleve Diplômé de l'Institute de Psychologie de l'Université de Paris" will be awarded to students who have completed the required courses of instruction and pass the examination. Diplomas in special studies in each of the sections on applied psychology will also be given.

Students, also, will be enabled to carry on *research work* under the direction of the Professors in the laboratories of the Institute and obtain diplomas for such higher studies or the university doctorates in letters and science.

Applications for admission will be received at the Bureau of Information of the University of Paris at the Sorbonne.

JOURNAL OF COMPARATIVE PSYCHOLOGY

Commencing with the January, 1921 number, *Psychobiology* and *The Journal of Animal Behavior* will be merged under the new name of *The Journal of Comparative psychology*. The *Journal* will be edited by Knight Dunlap and Robert M. Yerkes jointly, and published by the Williams and Wilkins Company in Baltimore. Studies contributing to the knowledge of mental function and behavior in any organism will be accepted for publication.

THE THOMAS A. EDISON PRIZE

The most meritorious research on THE EFFECTS OF MUSIC submitted to the American Psychological Association before June 1, 1921, will be awarded a prize of \$500.

This sum has been placed at the disposal of the Association by Thomas A. Edison, Inc. It is the wish of Mr. Edison and his associates to direct attention toward the importance of research in the psychology of music. They point out that we have today all too little scientific understanding of the effects, both affective and volitional, which contrasted sorts of musical selections produce on listeners of differing native endowment and training, under varying conditions of mood, season and physical condition.

CONDITIONS OF COMPETITION

Researches brought to completion during the present academic year may be submitted in competition for the Thomas A. Edison Prize. Manuscripts may be sent at any time before May 31, 1921, to the undersigned, who will transmit them, without the names of the authors, to the members of the Committee of

Award, to be designated by the American Psychological Association. Manuscripts should be submitted in form for publication.

The following topics are suggested as suitable, but the choice of subject is not limited to this list. The Committee will welcome any research bearing directly on the nature of music and the way it influences people.

APPROPRIATE SUBJECTS

Classification of Musical Selections according to their Psychological Effects.

Individual Differences in Musical Sensitivity.

Types of Listeners.

Validity of Introspection in Studying Affective Responses to Music.

Modification of Moods by Music.

Effects of Familiarity and Reptition: Emotional Durability of Various Types of Selections.

Effects of Contrasting Types of Music on Muscular Activity.

Other Objective (Physiological) Measurements of Effects of Musical Stimuli.

An Experimental Study of Music as an Aid in Synchronizing Routine Factory Operations.

For the Research Department, Thomas A. Edison, Inc.

W. V. BINGHAM,

Carnegie Institute of Technology, Pittsburgh, Pa.

THE JOURNAL OF ABNORMAL PSYCHOLOGY

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ORIGINAL ARTICLES

ON INSTINCTS¹

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[*Preliminary Note* :—Professor Hocking, who discussed the instincts before I became a member of the club, has very generously permitted me to read a manuscript of some chapters containing, I presume, a resumé of his discussion. The manuscript did not reach me till my own paper was nearly completed, or I should have made several changes, mainly in the direction of rounding off certain asperities and mitigating certain emphases. We have both been viewing the same large and complicated subject, but as might be expected, from different angles. Professor Hocking, as a philosopher and psychologist mainly from the human side and more introspectively and I, as a zoologist, from the animal side and more concretely and objectively. Professor Hocking is, I suppose, what Jung would call an introvert, whereas I am an extrovert. His picture of the instincts has classic proportions and is painted with delicate, deft brush-strokes in subdued colors, whereas mine can only be called impressionistic, or, perhaps, cubist. It is done with a broom dipped in whitewash, tar and other crude pigments and you will probably agree that it looks best from a distance of at least a mile. I have limited my treatment mainly to a brief history of the "Instinkt-begriff," a sketch which on reperusal, impressed me as being very inadequate, and a consideration of the methods of studying instincts, which is too dogmatic and combative. After I had reached this estimate of my paper, too little time was left in which to eliminate its many defects, to say nothing of writing a new paper, so that I shall have to read what I have written, even if it wrecks the club.]

THE economic entomologist is primarily engaged in a study of the relations of insects to one another, to other organisms and especially to man. All such relations, in so far as they involve the human race, may be distinguished as either actually or potentially beneficial or injurious, and are, of course, due to peculiarities of behavior. And since behavior, both in insects and in man is fundamentally of the type called instinctive, the economic

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entomologist, far from having to apologize for an interest in the perennial problem of instinct, would be deserving of censure if he failed to keep it constantly in mind. Moreover, no class of organisms offers such a marvellous field for the study of instincts as the Insecta. No other class, with the possible exception of birds, shows anything like the diversity and complexity of these phenomena and, owing to the great number of species, genera and families that have survived the vicissitudes of geologic time—a number far in excess of that of all other organisms on the planet—no other class exhibits such a complete representation of the historical or phylogenetic stages of many instincts.

As mere phenomena the instincts are well known and there is practical unanimity among authors in regard to their peculiarities. Any behavior is designated as instinctive which originates in an impulse, but the nature of impulse cannot be defined further than to say that it has both a conative and a cognitive aspect. Those who lay greater emphasis on the conative aspect prefer to use such terms as impulse, "Trieb," *hormé*, life urge, *élan vital*, etc., whereas those who wish to suggest the cognitive aspect use such terms as craving, appetite, desire, interest, libido, etc. The impulse is evidently the center or core of the instinctive activity, which is peculiarly fixed and mechanized, very rigidly dependent on inherited structure or organization and therefore very uniform, or variable only within rather narrow limits, in all the individuals of one or both sexes of a species. Behavior of this kind has the attributes of compulsion or necessity and is at the same time highly adaptive or purposive, though the organism manifesting it is unaware of any purpose, or at any rate is usually aware only of an immediate purpose, even when the behavior is accompanied by consciousness. This is the classic description of instinct as it recurs, with unimportant modifications, in countless works on the subject. It is perfectly evident that the description is essentially that of the life process itself and that we are unable, except by resorting to the artificial method of conceptualization, to confine instinct within definite descriptive limits.

When we endeavor to get at the meaning of the phenomena called instinctive we enter, as Wundt has remarked, a veritable museum of opinions. As few attempts have been made to write a history of the "Instinktbegriff" from Prearistotelian times to the present, you will pardon me for making a feeble attempt at a hasty sketch of such a history, especially as my point of view differs from that of the two

Neodarwinians, Gross and Ziegler, the only authors who seem to have discussed the matter. We can recognize in early Greek thought the common undifferentiated source of three very vital currents of opinion on the subject of instinct, which have flowed down to our own time, sometimes apparently blending, but always again separating and now occupying well-worn channels though occasionally exhibiting a tendency to branch and form new streams. These three currents of opinion, which correspond also to three different ways of looking at the problem of life in general, I shall designate as the theological or teleological, the physiological or mechanistic and the psychological or anthropomorphic.

The Oriental and early Greek philosophers, in accordance with their naive and natural attitude towards the animate world, made no sharp distinctions between the human and animal soul. There was therefore nothing to prevent animals from becoming the temporary abodes of human souls as assumed in the Hindoo, Pythagorean and Plutarchian belief in metempsychosis. That the common people among the ancients held similar views is clearly indicated by such compendia of folk-lore as Ovid's *Metamorphoses* and the *Golden Ass* of Apulejus. Such views are, indeed, the natural product of a people in the hunting and pastoral stages of culture. Moreover no one will deny that even the sexual relations of men, gods and animals are very much mixed in ancient folk-lore.

The more specific theological view of instinct seems to me to have had its origin in the use of animals for purposes of augury or divination, although no one, to my knowledge, has advanced this opinion. Primitive man and even the peasantry of highly civilized peoples are always deeply impressed by the fact that animals adapt their behavior to the meteorological conditions and attribute this adaptation to prevision or prescience. What is more natural, therefore, than to believe that such foresight is derived directly from the Deity and that it can be exploited for the benefit of mankind? The belief in the divine origin of instinct is expressed in many ancient writings but nowhere more beautifully than in Virgil's lines on the bees in the fourth book of the *Georgics*:

“These acts and powers observing, some declare
That bees have portion in the mind of God
And life from heaven derive, that God pervades
All lands, the oceans, plains, the abyss of heaven,

And that from him flocks, cattle, princely men,
 All breeds of creatures wild, receive at birth
 Each his frail, vital breath; that whence they came
 All turn again, dissolving." (T. C. Williams' translation).

The path of development of the theological view of instinct can be clearly traced through Plato, Aristotle, the Stoics and the Scholastics into modern theology. In Plato's earlier writings metempsychosis still has a place, but later, in his emphasis on the divine nature of the λογιστική or reason and its primacy in the human soul, he created a rift between man and the animals which was destined in the course of time to widen into a chasm. Aristotle gave greater precision to Plato's view with his distinction of the *anima intellectualis* and *anima sensitiva*, the former being peculiar to man, the latter common to man and animals. But Aristotle still left room for some belief in a gradual development of the animal into the human soul. The Stoics elaborated the Aristotelian conception and seem to have been among the first to use the word ὁρμή for what the Latins called *instinctus* (from *instinguere*, to incite). The Stoics conceived the ὁρμή to have been implanted in animals by God and, as we learn from the opinions of Crysippus reviewed by Cicero in the second book of the "De Natura Deorum," they laid great stress on its teleological aspect and were as expert in the use of the argument from design as any parson of early Victorian England. The Christian theologians failed to find any better interpretation of instinct and merely gave the Stoic and Aristotelian views a formulation which in their opinion settled the problem of the animal soul for all time. In the thirteenth century, St. Thomas Aquinas converted the distinction between the human and animal soul into an impassible gulf by his contention that when God created the world he implanted instinct in the animals and the free intelligence of the angels in man. As the angelic doctor and his successors could not deny to animals memory and the ability to profit by their individual experience, these endowments were added to instinct and intelligence was treated as synonymous with ratiocination. All traces of the genetic germ in Aristotle's conception had evaporated and the teleological aspect of instinct was conceptualized and exploited with all the astuteness of which scholasticism was capable. As a consequence, the animal world was treated as psychically uniform and there was no encouragement to inquire into such differences of behavior as separate the polyp from the elephant or the earthworm from the chimpanzee. The whole

scheme, if not actually devised for the purpose of making the human soul more amenable to ecclesiastical control, has, at any rate, most effectually accomplished that result. Ever since the days of St. Thomas the theological view of instinct and intelligence has been repeated by Catholic and Protestant divines alike with a monotonous reiteration which affords one of the most striking illustrations of the limitations of the clerical mind, and from Cicero, that William Jennings Bryan of antiquity, down to Reimarus, Paley and Kirby, the author of the Seventh Bridgewater treatise, all the facts accumulated by the observers of animals are manipulated according to the same old formula and converted into ecclesiastical propaganda.

Perhaps it is not generally known that of late there has been a great revival of Thomistic teaching in the Jesuit schools as a result of one of the encyclicals of Pope Leo XIII. That this revival has given the decrepit theological theory of instinct a new lease of life is apparent from the works of the Rev. Erich Wasmann S. J., an investigator justly admired for his remarkable studies on ants and termites and their guests and parasites. One of his works on the interesting beetle, *Rhynchites betulae*, the "Trichterwickler" of German entomologists, is a fine example of the theological method of studying instinct. The *Rhynchites* makes two transverse incisions in a birch-leaf and folds up the apical portion in the form of a compact case for its eggs and larvae. The lines of incision have been shown to be mathematical curves of such a nature as to represent the evolute of an evolvent and therefore to produce the leaf-area precisely suited to the beetle's purpose.

Wasmann concludes that the *Rhynchites* has been familiar with the solution of the problem of constructing the evolute of a given evolvent since the time of Adam, although Adam's descendants did not succeed in finding the solution till 1673, when Huyghens applied the differential calculus to geometry. Wasmann closes his study of the behavior of the beetle with the remark that "the vis aestimativa of St. Thomas Aquinas is even today and in the light of modern research, the best explanation of instinct," and with a little hymn in which the *Rhynchites* is exhorted to praise his Creator:

"Kleiner Trichterwickler, preise
Deines Schöpferarmes Macht
Preise Seiner Weisheit Wege
Die Kein Erdengeist erdacht;

Preise Seine Vaterliebe
 Deren Treue ewig wacht;
 Preise sie nach alter Weise
 In der glaubenslosen Nacht."

We can only congratulate the Trichterwickler on the effortless acquisition of his mathematical knowledge and suggest that he repeat as a refrain the famous stanza from the witch's song in Faust:

"Die hohe Kraft der Wissenschaft
 Der ganzen Welt verborgen,
 Und wer nicht denkt, dem wird sie geschenkt,
 Er hat sie ohne Sorgen."

And after commiserating Huyghens and ourselves on not having had the good fortune to be born Trichterwicklers, let us return to our historical sketch.

I may include the metaphysicians with the theologians because they have handled instinct in essentially the same fashion. When they disengaged themselves from the influence of the theologians and began to create their Weltanschauungen they merely made instinct a manifestation of their own peculiar gods. Thus Schelling attributed instinct to the "allwohnende Vernunft," G. F. Schubert to the "Erdpsyche," Schopenhauer to the "Wille als Weltprinzip," von Hartmann to the "Unconscious," Nietzsche to the "Wille zur Macht," Driesch to the "entelechy," Bergson to the "élan vital" and Newland to "telesthæsia" and "telepathy." As the type of mind, which delights in such constructions, is like the clerical mind, if we may judge from history, an ever recurring sport or mutant among human generations, comparable to DeVries' *Oenothera lata* or *oblonga* among the evening primroses or albinos among rodents, the future undoubtedly has in store for us many more explanations of like import.

The mechanistic or physiological view of instinct seems to be as ancient as the theological, and exhibits a similar vitality. It is the expression of another kind of sport, or mutant of which the earliest known examples are Democritus, Epicurus and Lucretius. These thinkers have always suffered harsh treatment at the hands of the theologians, and their ilk were either gagged or exterminated during the middle ages. In recent times, however, they have more than made up for centuries of enforced silence by becoming so vociferous and dogmatic that nothing else can be heard in the biological camp. When

they turned their attention to the instincts they ousted the concept of teleology and attacked the workable mechanical manifestations with zeal and truly marvellous success. They accepted Decartes' interpretation of animals as creaking machines, but threw his Jesuitical philosophy overboard and ended by becoming shockingly materialistic. They began to write the term instinct with a small letter and preferred its plural form. More recently they have taken to writing it in quotation marks or drop it altogether and resort to circumlocution when they discuss animal behavior. They regard instinct as nothing but a compound or catenary reflex determined by inherited structure of the nervous system. At bottom their view is no more evolutionary or genetic than that of the theologians, but when organic evolution was promulgated in Darwinian guise the mechanists embraced it with effusion and had no difficulty in showing, at least to their own satisfaction, how the instincts must have developed during phylogeny. They made the important discovery that the instincts of the same species often vary appreciably and concluded that this variation and that of the associated structures was indefinite. Natural selection and the survival of the fittest could then be introduced and the problem was solved. Of course, grave difficulties were encountered in the genesis of intelligence and consciousness, but these could either be ignored, minimized, slurred over or produced by a kind of prestidigitation from conflicting unconscious instincts or reflexes. The argument for natural selection was greatly assisted by fishing in the troubled waters of certain extraordinary entomological and botanical phenomena, which had not even been adequately observed and described as phenomena, such as protective resemblance and mimicry, the sterility of worker castes among the social insects, the relations of floral structures to insects, the supposedly passive adaptations of plants, such as those of wind-borne seeds and brilliantly colored fruits, and especially the instincts which are manifested only once and with great adaptive perfection during the life of the individual organism. I shall have another occasion to refer to these instincts for which I would coin the term *hapaxoraic* (from ἅπαξ, once, and ὥριος, ripening). The mechanistic or physiological view of instinct may be said to have reached its fullest expression in the works of Weismann, E. Ray Lankester, Poulton, Loeb, Bethe and many others and most of our speculative biological and not a little of the current sociological and economic literature is now saturated with the assertions of these investigators and their disciples.

The psychological or anthropomorphic view of instinct is probably as old as the other views I have been considering. It can be traced as far back as Heraclitus, Pythagoras and Empedocles but more clearly in the writings of Plutarch and the Neoplatonist Porphyrius. In the 18th century it reappears in the works of Montaigne, Condillac and Leroy. It is essentially a recognition of the fundamental identity of the animal and human souls, the differences between which are regarded merely as differences of degree of development. This implies that intelligence is not exclusively human and that the animal mind is to be interpreted in the light of human psychology, a procedure which is, of course, open to the charge of anthropomorphism. But owing to the fact that all our science is necessarily anthropomorphic and that man himself is merely a highly developed animal and therefore could not if he would interpret other animals except in terms of himself, the charge can only mean that he continually runs the risk of attributing to animals a greater development of intelligence than they possess. As scientific methods of observation and experiment are quite adequate for the control and rectification of this tendency, it is impossible to regard anthropomorphism as such a very terrible eighth mortal sin. It is strange, nevertheless, that only one modern biologist, the late A. D. Darbishire, has had the courage to look that approbrious and sonorous epithet squarely in the eye. He says: "The great length of the word, and its constant repetition, may in some degree account for its impressive effect and for its anaesthetic influence on the critical faculty. But be this as it may—and I intend it as no more than a tentative suggestion—there can be no doubt that the word anthropomorphism affords a very good instance of the baneful effect which a word may have on the course of thought. In its original restricted signification, in which it meant the endowing of God with the form and habits of man, it certainly denoted a grave intellectual misdemeanor, and the epithet anthropomorphic, which very accurately described this process, was rightly regarded as a stigma. But those who were responsible for the extension of the meaning of the word at the "endowed" end, for applying the word anthropomorphic to an entirely different thing—the granting of intelligence, purpose, design and human attributes in general to non-human animals, in order to stigmatise a concession to the "lower animals" which was repugnant to them—were the unconscious perpetrators of a successful fraud. One of the easiest ways to convince an audience of the untruth of an idea you wish to disprove is to apply to that belief a word

which has already been brought into discredit and obloquy. If you can persuade the audience that the word fits, the trick is done. In the case of the word anthropomorphism the audience needed no persuasion; they hated the idea that an animal had a soul, many of them hated the idea that they themselves had a soul; they liked to think of the organism as a machine, they liked their mechanical theory of evolution and they liked a long word. The belief that a non-human animal has an intelligence at all comparable to their own was branded with the word anthropomorphic, and flung into the ash-bin of exploded superstitions. It was an argument which effected the temporary expulsion of this belief; it was abuse. It was the very essence of abuse—which is calling things names."

The psychological view of instinct has certain great advantages. It is naturally genetic and favorable to the interpretation of organisms as historical beings. Instinct and intelligence are not regarded as separate faculties but as extreme phases of one psychical process which in our individual experience is continually lapsing from conscious and intelligent performance to the mechanized status of habit. The same process is supposed to have gone on throughout the phylogenetic history of the organic world and to have resulted in all the characteristic structures and behavior of existing organisms. In other words instinct is essentially inherited habit. Hence individual experience which is rejected as of no value by the Neodarwinians in comparison with the fortuitous concourse of accidental germplasma variations, must affect, at least in some measure, the constitution of succeeding generations. Expressing such a view means of course committing the ninth mortal sin, known as Lamarckism, which is faith in the inheritance of acquired characters and in the opinion that the function creates the organ. I can only remain impenitent and state my conviction that structure is after all the visible, highly mechanized end-stage of function and that our inability to detect the inheritance of an acquired character is probably due to the fact that its visible appearance is preceded in phylogeny by a period of many generations during which it is inherited only as a function associated with alterations of structure too subtle to be revealed by our present very crude methods of observation and experiment. Inheritance of alternative characters in definite Mendelian ratios would therefore be merely the method of inheritance of the stereotyped end-products of a long evolution and would not represent the actual phylogenetic method of the development of such characters.

The highly adaptive and teleological aspect of the instincts also becomes clear on the foregoing suppositions, since the completed instinct is merely the congealed result, so to speak, of more fluid or unstable activities of the random, trial and error, or perseverance type initiated and guided by a feeble intelligence. The argument used by my old teacher, Prof. C. O. Whitman and repeated by Holmes, that lapsed intelligence cannot account for instinct, because the phylogenetic sequence in the animal kingdom is instinct in the lower, followed by intelligence in the higher forms, seems to me to be easily answered, if we admit, what the researches of Jennings and others seem to compel us to admit, that even the lowest organisms have a glimmer of intelligence and that all organisms have a truly astonishing ability and tendency to form habits. If this is true a very feeble intelligence could conceivably build up in the course of ages a considerable and complicated fabric of instincts and structures, a fabric so impressive that in all plants and in many animals, we might be unable to detect the diminutive intelligence by which it had been so slowly and painfully initiated and elaborated.

A view of the instincts essentially like the one I have expounded, but expressed in somewhat different and possibly more intelligible language, has of course been held by a long line of eminent zoologists and psychologists, including Lamarck, Darwin, Romanes, Samuel Butler, Cope, Hyatt, G. H. Lewis, Bain, Spencer, Eimer, Preyer, Wilser, Wundt, Ribot and G. H. Schneider. Recently Paully, Francé and Camillo Schneider have given this view a more neovitalistic formulation, while others, like Rignano, Geo. Darwin, Semon, James Ward, Piéron, Brun and Hartog have followed Hering and Samuel Butler in developing a mnemonic school, the main contention of which is accepted by Haldane and expressed in the following luminous sentence: "In a living organism the past lives on in the present, and the stored adaptations of the race live on from generation to generation, waking up into response when the appropriate stimulus comes, just as conscious memory is awakened." (*Organism and Environment*, p. 98).

What I wish to say concerning the methods of investigating instincts may be treated under three heads, the experimental, the historical and the psychopathic. The theologians, metaphysicians and sociologists have, of course, developed no peculiar methods of investigating biological phenomena. They take over, manipulate and interpret the output of investigation and, to judge from the result, some of them ought to be forbidden by law to indulge in such practices. The experi-

mental method, so universally applicable and successful in physics and chemistry is certainly of much more limited service in the departments of biology that deal with the living organism. As would be expected the method is most successful when applied to those phenomena which are most thoroughly mechanized and tend to repeat themselves, i. e. to the specialized and relatively stable end-stages of the life process. This is well seen in genetics where very simple experimental methods consisting of nothing but breeding plants and animals and sorting their offspring according to observable characters, have revealed the very startling uniformities of Mendelian inheritance. In the study of animal behavior important results have been achieved by experimentation in detecting the limits of the variations of instincts, in disposing forever of the notion of their infallibility and in elucidating the relations between stimuli and responses. The serious limitations of the method lie in the fact that the living plant or animal is not a mere mechanical system but a creative organism, a being that cannot be isolated from its environment like a material system and one which has the ability to epitomize its whole past in its structure and behavior. It will always be necessary, therefore, to supplement experimentation with the historical method. As this method, which has been so successfully employed by archaeologists and paleontologists, has of late fallen into undeserved disuse and even disrepute among laboratory biologists, I wish to show how it can be applied in the interpretation of behavior by a somewhat detailed consideration of three typical and to the superficial observer very simple insect instincts, the spraying instinct of *Formica rufa*, the balloon-making instinct of the Empidid flies and the spinning instinct of the caterpillars of moths and butterflies.

When the mound of any one of the numerous North American or Eurasian varieties of *Formica rufa* is disturbed, the workers at once rush to the most exposed surfaces of the nest, face the intruder, rise on their hind and middle legs, direct the tip of the abdomen forward and shower him with a spray of formic acid so fine as to be invisible except in a favorable light. These ants have, therefore, long borne the old Shakesperian name of *pismire*, from the colloquial, onomatopoeic *piss* and *mire*, which is still the Dutch name for ant and has the same root as the Greek *myrmex*, the Latin *formica*, the Icelandic *maurr*, the Persian *mir*, etc. The Century and Webster's dictionaries are, of course, propagating an error when they state that the first syllable of the word *pismire* refers to "the strong urinous

smell of an ant-hill." By bringing a bright metallic surface, such as the blade of a new pocket-knife, near the spraying ants it is found that they can project the acid several inches to a foot, as the surface instantly tarnishes or corrodes at such distances. The behavior of the ant has nothing to do with micturition, but is merely the discharging of a pungent, liquid and volatile glandular secretion. Anyone who brings his eyes too near a nest when the ants are working their apparatus under high pressure and the nest is enveloped in a cloud of acid fumes, will have no doubts about its value as a means of defence against the bears, skunks, rats, mice and birds which often dig in the ant hills to get the larvæ and pupæ of which they are very fond. But the formic acid can also be used offensively and at very close range, as we see when we dump a lot of ants of an alien species on the nest. Then each *rufa* worker seizes an enemy with its mandibles, turns the tip of its abdomen forward to the wound made by these appendages and thoroughly drenches it with the acid. The secretion thus entering the blood of the victim causes instant paralysis or even death. When a *rufa* worker performs this operation on the human body the sensation is that of a sting though it is not, as commonly supposed, produced by a sting. Shakespeare falls into this error when he makes Hotspur say in Henry IV (1.3, 240):

"Why, look you, I am whipp'd and scourg'd with rods,
Nettled and stung by pismires."

When we examine the spraying outfit under the microscope we find it to consist of a voluminous, muscular sac or reservoir into which opens a tubular gland, several centimeters in length, but so slender and so densely coiled that it makes a small cushion applied to the inner dorsal wall of the sac. The latter opens at the tip of the abdomen with a very small circular orifice on a papilla fringed with a circle of ciliary hairs. The organ is merely an atomizer in which the rubber bulb is represented by the muscular sac.

We now know the machine and how it works and my friend Dr. Loeb would undoubtedly ask me: "What more do you want?" I would reply that I am one of those absurdly inquisitive people who might like to know how the pismire came into possession of its atomizer, whether it was a present, purchased, stolen or made by the pismire itself. As I have no reason to suppose, however, that the pismires have passed in procession before the throne of the Almighty and have been handed their atomizers like so many diplomas, and as

I have never heard of ants breaking into drugstores for the purpose of stealing atomizers or buying them over the counter and as I have actually seen stained sections showing various stages in the development and growth of the apparatus, I feel sure that each pismire must make its own atomizer, and my respect for the insect is greatly increased. But when I see how very quickly and deftly it makes the apparatus I suspect that after all it is so skillful merely because its living substance is really continuous in time with that of untold generations of pismires that have been in the atomizer business for millions of years. Of course, the only way I can satisfy my morbid curiosity in regard to the way this business was carried on in former ages is to pose as a benevolent old archeologist and to ask all the pismires' sisters and cousins and aunts and all the remoter relations of the family *Formicidæ* to show me their atomizers or any similar heirlooms in their possession. A number have complied with my request and, to make a long story short, this is what I find:

Some of the most ancient and primitive insects, like their ancestors, the centipedes, had at the hind end of the body more legs than were needed for purely locomotor purposes. They therefore used them as implements for making holes in the soft soil and took to laying their eggs in these holes. A more efficient implement was later perfected by bringing two or three pairs of the slender legs together to form a tube through the lumen of which the eggs could be passed into the soil by an up and down movement of the appendages on each other. The friction of these hard parts was then overcome by the use of a lubricating solution derived from one or more cutaneous glands that originally opened on the surface of the body at the bases of the appendages. Thus what is called an ovipositor with its lubricating gland was developed much as you see it in any female cricket you may chance to meet on a country roadside in October. In other insects, like the gall-flies and ichneumons, the ovipositor became shorter, stiffer and more pointed at the tip, so that the eggs could be inserted in the hard woody tissues of plants and through the tough integuments of other insects. After acquiring this kind of an ovipositor the insect found that it could be used also as a weapon and after the lubricating liquid had become poisonous it became a formidable sting. When this stage was reached two paths of development were opened up, one of which is seen in the solitary wasps, the other in the social wasps, social bees and lower ants. In both groups the function of oviposition became dissociated from that of the sting, as the solitary wasps found it

advantageous to sting their prey and thus kill or paralyze it and then simply to lay their eggs on its surface, so that the hatching larvæ could become external feeders, while the social wasps, social bees and lower ants no longer needed an ovipositor because they had come to live in populous colonies and could easily defend their progeny with their stings. But the sting in the lower ants had still the disadvantage that it could be used only at close range and therefore often imperiled the life of its possessor. This disadvantage was overcome by greatly increasing the size of the poison gland, the abundance of its secretion and the contractility of its reservoir, so that the poison could be thrown to a distance in the form of a spray. At the same time for hand to hand encounters the mandibles could be used with telling effect and supplemented by the poison gland. That this has been the evolution of the pismire's atomizer is shown by the presence of a very minute and now functionless sting just within the anal orifice. Thus the insects have passed through various stages in the development of offensive and defensive organs just as man has passed from the stage, indicated by the Latin *comminus*, when he used his nails, teeth, fists and the sword to the *eminus* stage, beginning among primitive savages with the hurling of stones and javelins and ending in modern ballistics with the great guns which were recently booming on the war fronts. Incidentally it may be noted that these stages are repeated with appropriate coenogenetic modifications in the ontogeny of the individual man. As a child he bites and scratches, as a boy he throws stones, or uses a sling or a shot-gun, and as an adult he sprays his real or fancied opponents and even his friends with showers of words, as I am doing this evening.

Although I have had to be very brief in my account of the evolution of the atomizer of *Formica rufa*, I believe enough has been said to show how limited would be our knowledge if we confined our attention to observations and experiments on this ant and how superficial is the viewpoint of the natural selectionist who would dispose of such a case by croaking the old formula: "If such a structure as the atomizer had not appeared as a chance variation and been selected, the pismires would have gone to the wall in the struggle for existence." The case of the pismire is typical of many others in that it shows very clearly how the function guides and modifies and builds up the organ according to the principle of Funktionswechsel, first elucidated by Anton Dohrn. The function is continually changing, shifting and dichotomizing in obedience to the needs and experience of the organism

and the organ merely reflects these changes in the development of its various parts. The atomizer of the pismire now subserves the function of creating around the nest a barrage of formic acid fumes, comparable to the poison gas and liquid fire of the German army, but it may truly be said also to epitomize the multimillennial history of such very diverse instruments as ambulatory limbs, an egg-laying machine and a poisonous stiletto.

My second case is that of a peculiar fly, *Hilara sartor*, the male of which was long ago observed to fly about carrying in its claws a peculiar plaque of frothy white substance which it presented to the female and which was held by the latter during copulation. For some years this extraordinary performance furnished material for a rather acrimonious discussion among German and Austrian entomologists. In 1899 Aldrich and Turley observed another fly, since appropriately called *Empis aërobatica*, of the same natural family, the Empididæ, in the mountains of Idaho. The male of this species was seen to present the female with a beautiful frothy balloon, or diminutive Zepelin, and closer observation showed that the gift bore at one end a minute dead fly of a different species. This behavior was if anything even more inexplicable than that of *Hilara sartor*, and speculation, powerless to suggest its meaning, rested till Howlett and Hamm began to study the habits of various Empididæ in England. They found an extraordinary diversity in the behavior of these flies representing the following series of stages in the development of the instinct of *Hilara sartor*.

The first stage is seen in the ancestors of the Empididæ, the intrepid robber flies of the family Asilidæ, both sexes of which capture and devour insect prey before mating, because like some other adult insects, they need food in order to develop their eggs and sperm.

The second stage is seen in various species of *Empis*. According to Howlett the females of *E. borealis* dance up and down in the air in swarms till the males put in an appearance one by one, each bearing in his claws a recently killed fly of another species and hand it over to the female. The flies then settle on the vegetation in couples and copulation takes place while the females are diligently sucking the juices out of their wedding presents. These observations were later confirmed by Hamm, the assistant of Prof. Poulton at Oxford, on various species of *Empis*, *Pachymeria* and *Rhamphomyia*.

The third stage is represented by three species of *Hilara* (*maura*, *interstincta* and *aëronetha*) observed by Girschner and Mik. The

male of these species envelops his prey with a delicate froth which is really his dried saliva and then hands it to the female. The male's mouth waters, so to speak, after he has captured a juicy fly, but he represses his desire to devour it and presents it to his mate enveloped in the frothy evidence of his self-control. This leads directly to the condition seen in *Empis aërobatica*, the male of which has discovered that it is very easy to capture some weak little fly and by adding to it a great mass of his own frothy saliva to convert it into a very acceptable present.

The fourth stage, finally, that of *Hilara sartor*, is easily derived from that of *Empis aërobatica* since the male of this fly simply gives up the hunt for prey altogether and presents his mate with a mass of spit-bubbles.

But this is not the whole story. The racial history of the Empidid courtship instinct dichotomized at what I have called the second stage and ran off into an interesting side-line, first elucidated by Hamm in his study of certain common species of *Hilara*, long known to European and American entomologists. The males of these insects fly in swarms with a peculiar zigzag movement directly over the surface of rapidly flowing streams. It was supposed that the flies were merely celebrating a kind of bridal dance, but the English observer showed that they are really carefully scrutinizing the surface of the water for the bodies of small dead insects or even for minute particles of wood and leaves, and that as soon as such objects float within their reach, they eagerly seize them, carry them up into the air and hand them to the females, which then promptly submit to the nuptial embrace while they turn their presents over and over with their legs. Hamm tells me that the performance can be easily and spectacularly demonstrated by throwing a lot of small, white objects, such as the ray-florets of a daisy, on the surface of the stream. As soon as they pass under the swarm the flies pounce on them, fish them out of the water and bear them aloft to their females like a lot of banners. Then the couples settle down on the vegetation and begin the serious business of procreation.

The nuptial instinct here sketched in its various phases is unusually interesting because it shows how portions of the living and inorganic environment may be drawn into the vortex of the developing impulse or craving as if they were merely so many added organs and how these portions of the environment change and merge into such purely physiological functions as secretion. The picture is not that of

a lot of discrete tropisms or reflexes glued together like a collection of material particles as the mechanists would have us believe, but of activities radiating from and sustained by the simple need of the female for the possession of some small object, originally necessary as food but in many species now required merely for the satisfaction it furnishes through the tactile sense, and the need of the male to procure such an object as an indispensable means to the alleviation of his sexual appetite. That Virgil's *varium et mutabile semper femina* is not strictly true and that the female of such a highly endowed mammal as man has a similar persistent instinct is only too apparent. Perhaps the cave women had nothing to do with the cave men till the latter brought them steaks of the aurochs or the mammoth. But we need not go so far back in history to find analogies. There are females in our midst whose coyness has been overcome by a lobster and champagne supper, or the present of a diamond ring, a motor-car, or a bank account, and in future an *aëroplane* or a Zeppelin may be necessary, as it is in *Empis aërobatice*. Some, however, have been known to succumb to such easily procured trifles as a bunch of violets or a lock of hair. And if the war continues much longer and males become very scarce, no presents will be required, and the final condition seen in certain male Empidids, which are accepted even when they present themselves empty-handed, will, I surmise, be only too common.

My third case has often been considered by writers on instinct but never, to my knowledge, with becoming seriousness. In the higher Lepidoptera we find two peculiar methods of pupation, which may be illustrated by the milkweed butterfly (*Anosia plexippus*) and the cabbage butterfly (*Pieris rapi*). The mature caterpillar of the former spins with its lower lip on the under surface of a milk-weed leaf a button of silk and hangs from it by means of the hind legs. Soon the skin splits along the back and the chrysalis wriggles out and, to avoid falling to the ground, clamps the larval skin between two of its abdominal segments, till it can disengage its caudal end and hook it into the silk button. Then the shriveled skin is released and drops away and the head downward from the button. The cabbage-butterfly caterpillar spins, in addition to the silken pad, a rope-like girdle around the middle of its body and attaches the ends to the surface on which the button was spun. This girdle serves to support the chrysalis, very much as a papoose is held to the back of an Indian squaw by a strap, while the larval skin is being sloughed and the anal hooks are inserted in the pad.

Now the making of these small silken attachments and the accompanying behavior is a true hapaxoræic instinct of the deferred type, since it is unique in the life of the insect, performed with the most consummate skill and without imitation or previous instruction. It is in fact typical of the class of instincts that have elicited both the admiration and the glib explanations of natural philosophers and selectionists, largely because neither observation nor experiment throws any light on the historical signification of such structures and behavior. When we study the cases of *Anosia* and *Pieris* comparatively and historically, however, they are seen to represent the last, highly specialized stages of a very long history, the course of which can be traced back through the moths, the ancestors of the butterflies, and the caddice flies, which are the ancestors of the moths, to the ancient and primitive insects of the Carboniferous age.

There are, however, insects still living, that give us a fairly satisfactory picture of the early developmental stages of the spinning instinct. Every spring I notice that the Harvard faculty and students tread on great numbers of the imported ground-beetle, *Carabus nemoralis*, because it has not yet learned to keep off the pavements around the college yard. If instead of putting your foot on one of these beetles you pick it up tenderly and give it a little piece of fresh beefsteak, it will return the kindness by giving you a demonstration of the first step in the evolutionary process that has culminated in your best silk socks and neck-tie. The beetle will begin by pouring a lot of saliva over the beefsteak and if you have it under a microscope you will notice that the muscle-striations in the meat soon vanish and that the mass becomes gelatinous and then deliquesces.¹ When it reaches this condition, which is brought about by a powerful proteolytic ferment in the saliva, the beetle swallows and assimilates the food that has thus been digested outside its body. This method of digestion is now known to be very general in both biting and sucking insects and the larvæ of some of the lower forms, after digesting the soft parts of their insect prey, stick the indigestible remains together with more viscid saliva and convert them into an overcoat for their own soft bodies. The viscid saliva is merely archæic silk and the salivary glands

¹The liquid poured from the mouth of *Carabus* is probably not saliva but gastric juice, so that for this hypothetical stage in the development of the spinning instincts I would substitute such an employment of the saliva as that exhibited by *Peripatus* and certain larval Mycetophilids. The former catches its prey by spitting at it and entangling it in viscid saliva, and some of the latter spin glutinous webs of saliva for the same purpose.

which produce it are actually on the road to becoming the highly specialized sericteries of moths like the silk worm.

The larvæ of caddice flies and lower moths have for millions of years been making most extraordinary cases for themselves by spinning together any small bits of matter in their environment, such as sand-grains, pebbles, small sticks and leaves. They begin to use their sticky saliva or silk in this manner as soon as they hatch and keep on building cases throughout life, discarding them from time to time and constructing larger ones to fit their growing bodies. This behavior can be easily studied under artificial conditions. One has only to push a caddice fly larva out of its case and place it in a jar of water containing small bits of glass, iron filings, bits of filter paper, etc. After wriggling about for a few minutes it sets to work collecting these fragments and spins them together with astonishing skill into a case of the form peculiar to its species but consisting of materials which it has never before encountered. The caterpillars of the lower moths, which are very closely related to the caddice flies, spin their own feces together in a similar manner or roll up leaves and stitch them together with silk. In more specialized moths the larva remains naked and retains its silk in the sericteries till maturity, when it spins leaves or other objects together and makes a single case, the cocoon, in which it pupates. A further stage is reached in such highly developed species as the silk worm, which no longer incorporate extraneous materials but make a perfectly elliptical cocoon of pure silk. In some species this substance is spun in such a way as greatly to facilitate the emergence of the moth at one end of the cocoon. In all cases, however, the cocoon of pure silk is spun only by attaching its first threads to foreign bodies as if to recall the preceding phylogenetic stages in which portions of the environment were actually incorporated in the fabric. The cocoon of the silk-worm and its allies represents the acme of the spinning instinct, which in the lower butterflies enters on a period of involution. Some Hesperid caterpillars spin a flimsy and degenerate cocoon, while other primitive butterflies make a structure with a Y-shaped area of denser silk, to which the chrysalis attaches itself. The cocoon is then omitted and the Y alone survives and is separated into two masses of silk, one of which, corresponding to the branches of the letter, becomes the girdle of *Pieris*, while the stem of the Y contracts to form the button. Finally, in *Anosia* the girdle is omitted and the minute button, from which the chrysalis hangs, alone persists as the last vestige of the cocoon. In some insects, like the ants, a further condition, that of the

complete suppression of the spinning instinct, may be reached simply by a progressive thinning out of the walls of the cocoon.

The foregoing history is very instructive because it is so complete and shows how an hapaxoræic instinct may arise from one which is originally repeated throughout a long period of the insects's life. The suppression of the spinning instinct till the close of larval life in the higher Lepidoptera and the large amount of liquid silk thus accumulated in the sericteries, seem to have enabled the insect to make a single supreme and complicated effort that would otherwise have been impossible. I believe that all deferred and hapaxoræic instincts may have had a similar origin from activities originally spread over the whole life period or over a whole developmental instar. The way is thus open for the interpretation of such structures as the ovipositor of the female and the copulatory organs, or "lock and key" arrangements, as Cope and T. H. Morgan have called them, of both sexes. The selectionists and mutationists appeal with great gusto to such structures, because they are so wonderfully adaptive although used only once during the life-cycle of most insects. There can be little doubt, however, that the most ancient insects, like existing cockroaches and termites, were long-lived and oviposited and copulated repeatedly and not only once like their modern very highly specialized descendants. Hence individual experience and use, and disuse may have had much to do with perfecting these so-called "passive adaptations." Similarly such phenomena as the permanent protective coloration of insects may be regarded as the stereotyped, highly specialized end-stage of a more ancient ability actively to change color in response to color changes in the environment, an ability still possessed by some primitive insects like the grasshoppers and mantids, though much more pronounced in cephalopod mollusks, fishes, amphibia and lizards.

Of course, I do not pretend that the historical method of studying instincts, as I have endeavored to illustrate it, is capable of yielding results of great precision or certainty. It has serious limitations, some of which are inherent in the limitations of the living and fossil faunas accessible to us. Many of the most extraordinary instincts are exhibited only by isolated and specialized groups of species, and though we may be able to detect certain developmental tendencies within a group, it is sometimes impossible, and may always be impossible, owing to the extinction of the more primitive allied forms, to form any satisfactory conception of the origins or early stages of a particular instinct. To this class belong the fungus-growing instincts of the At-

time ants and of certain genera of termites and the nest-spinning habits of certain tropical ants of the genera *Camponotus*, *Polyrhachis* and *Oecophylla*. Other limitations are inherent in the method itself which is of such a character as to require constant revision and considerable restraint and taxonomic information on the part of the one who employs it. It is, nevertheless, sufficiently valuable to merit more attention on the part of modern biologists, and especially of some of our students, whose intellects are obnubilated by the notion that biology begins and ends in physics and chemistry and that it is bad form to be able to recognize at sight more than fifteen animals and ten plants.

The third method that promises important results in the study of instinct is the psychopathic, for we have been taught to believe that the investigation of the pathological has a value second only to that of experiment. There is much to support this view. Boris Sidis says, when referring to the belief that the investigation of the normal precedes that of the pathological: "This belief is erroneous and is only given credence to by people who have not thought much on the subject, and especially by those who belong to the so-called "new psychology" school. As a matter of fact the investigation of the abnormal in scientific research precedes that of the normal. The investigation of the abnormal is one of the most potent instruments for new discoveries. The method of experimentation, the most powerful tool of modern science, is in fact the creation of the artificial conditions, in other words, the effecting of the abnormal states. Where the compound is complex, where the constituent facts and their relations are imperfectly or all but unknown and not therefore under control, the spontaneous occurrence of some anomaly ought to be greeted enthusiastically, as it displays the rôle played by the modified or excluded factor. This is specially true in the case of mental life, where the phenomena under investigation are the most complex in the whole domain of science, where a direct modification of the functioning mental activity is as a rule impossible without the production of some anomaly." Similar considerations have led me recently to read some twenty volumes of psychoanalytic literature comprising the works of Freud, Jung, Brill, Adler, Ernest Jones, Ferenzci, Bjerre, and W. A. White, with the result that I feel as if I had been taking a course of swimming lessons in a veritable cesspool of learning. As I have not since had an opportunity to take a spiritual

shower-bath you will understand why my remarks throughout this paper lack the customary refinement of a Sunday evening discourse.

I should, of course, be wandering entirely off my beat if I attempted seriously to discuss psychoanalysis, but I cannot refrain from recording a few personal impressions of what I believe to be one of the most extraordinary and far-reaching contributions to thought. Having had a fling at nearly all the types of biologists and at the non-biologists who have handled instinct, I now see my opportunity to get under the skin of the psychologists. After perusing during the past twenty years a small library of rose-water psychologies of the academic type and noticing how their authors ignore or merely hint at the existence of such stupendous and fundamental biological phenomena as those of hunger, sex and fear, I should not disagree with, let us say, an imaginary critic recently arrived from Mars, who should express the opinion that many of these works read as if they had been composed by beings that had been born and bred in a belfry, castrated in early infancy and fed continually for fifty years through a tube with a stream of liquid nutriment of constant chemical composition. To put it drastically, most of our traditional psychologies are about as useful for purposes of understanding the human mind as an equal number of dissertations on Greek statuary would be to a student eager for a knowledge of anatomy. Such a student at once learns that the object of his investigation, the human and animal body, is very largely composed of parts offensive to the aesthetic sense, but this does not deter him from studying them as thoroughly as other parts. The typical psychologist, who might be expected to study his material in the same scientific spirit, does nothing of the kind, but confines his attention to the head and the upper extremities and drapes or ignores the other parts.

Now I believe that the psychoanalysts are getting down to brass tacks. They have discovered that the psychologists's game which seems to consist in sitting down together or with the philosophers and seeing who can hallucinate fastest or most subtly and clothe the results in the best English, is not helping us very much in solving the terribly insistent problems of life. They have had the courage to dig up the subconscious, that hotbed of all the egotism, greed, lust, pugnacity, cowardice, sloth, hate, and envy which every single one of us carries about as his inheritance from the animal world. These are all ethically and aesthetically very unpleasant phenomena but they are just as real and fundamental as our entrails, blood and reproductive organs. In

this matter, I am glad to admit, the theologians, with their doctrine of total depravity, seem to me to be nearer the truth than the psychologists. I should say, however, that our depravity is only about 85 to 90%.

In nothing is the courage of the psychoanalysts better seen than in their use of the biogenetic law. They certainly employ that great biological slogan of the nineteenth century with a fearlessness that makes the timid twentieth century biologist gasp. But making all due allowance for the extravagant statements of Freud and Jung and their disciples, any fair-minded student of human nature is compelled to admit that there is a very considerable residuum of accurate observation and inference in their accounts of the dream, of the perversions of the nutritive and sexual instincts, of the erotic conflicts and repressions and of the surviving infantilisms. If Freud told us, as he probably would if he were here, that all of us who have been smoking this evening have merely been exhibiting a surviving nutritional infantilism with the substitution of cigars for our mothers' breasts, we should, of course, exclaim, like some New England farmer confronted with a wildly improbable statement, *Gosh!*— But after all, is the substitution by a man of a roll of dried *Nicotiana* leaves for a woman's breast, any more preposterous than the Empidid's substitution of a balloon of salivary bubbles for a juicy fly, or the substitution by the birds living near a certain village of watch-makers in France, of discarded watchworks for twigs in the construction of their nests?

To me one of the most striking indications that the psychoanalysts are on the right road is the fact that many of their theories have such a broad biological basis that they can be applied, *exceptis excipiendis*, to a group of animals so remote from man as the insects. This has not escaped Jung, who calls attention to the striking analogies between the nutritive caterpillar stage and human infancy, the chrysalis and the period of latency and the imaginal butterfly and puberty in man. There are even cases of repression and sublimation as in the workers of social insects, and did time permit I could cite examples of multiple personality or of infantilisms, i. e. larval traits which survive or reappear in the adults of many species. Insects undoubtedly sleep. Do they dream? If they do, what a pity that we shall never be able to apply the Freudian analysis to the dreams of that symbol of sexual repression and sublimation, the worker ant!

But these are trivial considerations. The great fact remains that the work of the psychiatrists is beginning to have its effect even on

such hidebound institutions as ethics, religion, education and jurisprudence, and that the knowledge that is being gained of the workings of our subconscious must eventually profoundly affect animal no less than human psychology, since the subconscious *is* the animal mind.

PSYCHOPHYSICAL SYMPTOMS OF DECEPTION

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MANY treatises have already appeared upon the use of association-word reactions in detecting ideas or systems of ideas which are either consciously or unconsciously suppressed. The method has become well known particularly through the writings of Dr. Jung who has been primarily interested in bringing to consciousness the suppressed complexes which, according to his theory are the underlying cause of various abnormal states. This method of probing the subconscious by taking the time required to form association of ideas and by analyzing the word responses made to the stimulus word not only is one of the principle instruments of the psycho-analyst, but for some years has also been used as the basis of experiments aiming at the detection of deception. The method has on several occasions been used to detect actual crime, but for the most part such experiments have been performed under the artificial conditions of the laboratory in order to test the reliability of the results. The chief characteristic of the laboratory experiments is the selection of two individuals, one of whom is to carry out a series of acts of which the other is ignorant. The experimenter does not know which of the two individuals has committed the prearranged act, and his task is to discover the "culprit" by subjecting both individuals to the word-reaction experiment.

The details of the experiment have been clearly described by Professors Yerkes and Berry,¹ and are well known to all experimental psychologists. The method has in fact become sufficiently standardized to be used in training courses in laboratory technique.²

I have each year conducted the experiment both upon a group of men and upon a group of women. Latterly I have added the blood pressure test which has been developed by Mr. W. M. Marston and described by him in a paper entitled "Systolic Blood Pressure Symptoms of Deception."³

¹The Association Reaction Method of Mental Diagnosis, *Am. Jour. of Psychol.*, 1909, pp. 22-37.

²See Langfeld & Allport's "An Elementary Laboratory Course in Psychology," pp. 112-116.

³*Jour. of Exp. Psychol.*, April, 1917, pp. 117-163.

Notwithstanding the fact that an extensive literature has already appeared upon this subject it seems to me that certain of the conditions and results obtained this year in the experiment conducted in the course for women are of sufficient interest to justify a description of the experiment in some detail.

Twelve members of the class drew lots to decide which ones were to be the subjects in the experiment. This method of selection was used in order to avoid the criticism that subjects were intentionally chosen, whose temperaments were most conducive to a successful outcome of the test. It is obvious that if the guilty subject were of the highly emotional type and the innocent subject of the opposite type it would be easy to obtain positive results, especially from the blood pressure tests.

In this experiment Subject A was extremely nervous. During the test her cheeks were flushed and she moved restlessly in her chair. In fact she seemed to show all the outward signs of guilt, and before the results were examined the experimenters thought her guilty. In reality she was innocent. Subject B was of the more stolid type. She seemed very self-possessed, and her attitude was one of indifference such as would be assumed by the unemotional or highly controlled and successful deceiver. An objection frequently made to the practical application of this experiment is that a very nervous individual, although innocent, will be so disturbed emotionally by the mere fact of being examined that he will give incriminating responses. One of the most interesting features of the test is that this did not occur.

The two subjects selected were given their instructions and the description of the "crime" in sealed envelopes and were asked to leave the room together. Outside they tossed a coin to decide which was to carry out the crime. Care was taken that the innocent subject should know nothing of the nature of the crime. The subject whom chance designated as innocent opened the envelope which bore the legend "Direction to innocent subject," and obeyed the instructions which were as follows:

"Go into Room U and read a magazine which you will find on the table. When the guilty subject returns either you or she, as you two decide, will rap on the classroom door."

From Room U she could not see what was done by the other subject. The directions to the guilty subject read:

"Go into the Physical Laboratory in the Gilman Building (it is the large room at the end of the hall on the first floor). On the right as you enter is a table used by the instructor, having four drawers and doors beneath. Open the left one of these doors and you will find on a shelf the following articles:

1. A bottle of alcohol.
2. A bottle of coloring fluid.
3. An empty bottle with label and cork.
4. A typewritten letter with a stamped, addressed envelope and a sheet of blank paper attached.
5. A pencil.

"Examine all these articles carefully, reading the labels. Now pour about one inch of alcohol into the empty bottle and fill almost full of water at the tap. Put in enough coloring fluid to color the mixture light brown, and shake thoroughly. Replace the alcohol and coloring fluid on the shelf.

"Now take the mixture you have prepared and wrap the bottle with newspaper and string which you will find on the table. Copy the typewritten letter in your own handwriting, place it in the addressed envelope, and mail it in the box on Garden Street.

"After doing this take the parcel containing the mixture to Brown Nichols building. On the right as you enter the vestibule is a radiator. Conceal the package carefully on the floor behind the radiator. Destroy both this instruction sheet and the typewritten letter which you have copied. Work quickly and secretly.

"Go now to Room U and join the innocent subject. Do not tell her or anyone else what you have done. You or she, as you two decide, will then come and rap on the door of the class room."

The contents of the "typewritten letter" were:

Cambridge, Mass., 1921.

Dear Mr. Thurst:

Your order containing check for twenty dollars was received. You will find remedy No. 3 behind radiator in Brown Nichols. Date of manufacture was 1873. Container changed for protection.

Yours for further orders,

X. Y. Z.

The envelope provided for the mailing of this letter was addressed to Mr. A. B. Thurst, in care of the assistant in the course. The label on the bottle read "Scotch Rye Whiskey." One of the bottles contained in reality water and the other Worcestershire Sauce. The subject, however, did not know this. The crime and the details of carrying it out were arranged so as to make the situation as real as possible and to arouse in the subject a strong emotional reaction such as would actually occur in one who had committed a misdemeanor.

It should be an act which the subject would hesitate to commit and which he would desire to conceal. In short, it should be sufficiently realistic to be highly suggestive of crime. Frequently in such experiments the subject is merely placed in the situation which will arouse the emotions, such as the handling of mice or the confrontation with a gruesome object; but in such instances there is an absence of the factor of concealment which is necessary for the true crime consciousness.⁴

When the instructions had been fulfilled one of the two subjects entered the classroom and was seated in a chair on the platform facing the class. The instructor sat next to her and gave the stimulus word to which she was instructed to respond with the first word which should come into her mind. The time was taken with a stop watch. There were fifty stimulus words, twenty-five of which—the *crucial* words—were related to the crime. The stimulus words were given in as quick succession as possible. When the list was completed the other subject was called and the same procedure repeated.

At the next meeting of the course three days later the blood pressure test was made. The subjects had been instructed not to discuss the experiment in the meantime nor to tell anyone which of them committed the crime. The subject was again seated on the platform. Mr. W. M. Marston, a member of the Massachusetts bar, cross-examined the subject and Mrs. Marston took the blood pressure. A Tycos Sphygmomanometer was used and the systolic pressure was recorded.

Before interrogating the subject a few blood pressure readings were taken in order to obtain a norm from which to calculate the rise in pressure due to the cross-examination. Such a norm consists of the normal blood pressure plus the pressure due to the excitement of the situation. The subject was then asked general questions not connected with the crime in order to get any possible rise due to the conversation. There then followed a period of cross-examination upon the events of the crime and finally a period of rest corresponding to the preliminary period. The blood pressure was taken during all these periods at an interval of about a minute.

RESULTS

In the table are the list of stimulus words and the reaction words and reaction times of the two subjects. The crucial words, that is, those connected with the crime, are in italics. The reaction times to

⁴For the details of the crime I am indebted to Dr. F. H. Allport who assisted me in the course.

the crucial words together with their deviations from the average are in separate columns from those to the non-crucial words.

The reaction times of the innocent Subject A to the crucial words were only on the average .37 seconds longer than the reaction times to the non-crucial words. This is 24% of her average reaction time to non-crucial words. The guilty Subject B, on the other hand, showed a difference of .83 seconds, or 62% of her average reaction time to the non-crucial words. Her delay in reacting to words connected with the crime was over twice that of Subject A. The amount of variation in the reaction times to the crucial words, as compared to the variation in the reaction times to non-crucial words, is frequently even more significant as an indication of guilt than is the difference in reaction times. In this instance Subject A showed a difference between the average variation of the crucial and non-crucial reaction times of only + 7 $\frac{1}{3}$ per cent while Subject B showed a difference of + 41 per cent. One is justified from a comparison of these figures alone in coming to a decision as to the guilt or innocence of the subjects.

In my experience with these tests I have found that a comparison of the reaction times and the average variations gave more valuable information than an analysis of the quality of the reaction words. It frequently happens that the innocent subject gives a word response that is closely related to the crime not because the subject is acquainted with any part of the crime, but because that particular association is a very common one to make with the stimulus word. Any judgment, therefore, based on such a response would be misleading. For example, Subject A responded with "rum" to "bottle," with "Scotch" to "whiskey" and with "postman" to "mail," etc. On the other hand Subject B's response of "alcohol" to "whiskey" cannot in itself be considered suspicious. In several experiments where the judgment was based upon the quality of the reaction words it was incorrect, while in the many experiments I have made in which the judgment was based upon a decided difference in reaction times and mean variations, the right subject was judged guilty.

Attention should also be called to the fact that in the case of the innocent subject several complexes of a private nature in no way connected with the crime were set off, once by the non-crucial stimulus word "morphine," another time by the crucial word "destroy" and a third time by the crucial word "Gilman." The word "destroy" was associated in the student's mind with a recent fire in the dormitory

which destroyed most of her property.⁵ It happened in this instance that the lengthened reaction times practically cancelled each other. Such a cancellation, however, is not likely to occur when only fifty stimulus words are used. On account of the element of chance in tapping such extraneous complexes it is advisable, if possible, to use several hundred stimulus words.

In charts I and II are plotted the rise and fall of blood pressure of the two subjects. As Mr. Marston has shown in the above cited paper, the significant feature in the lying curve is the difference between the maximum rise in the curve during the lying period and the average blood pressure during the pre-lying period. The characteristic lying curve shows a gradual rise in pressure during lying with a fall in the post-lying period, the latter being due to the release from the tension of the lying period when the subject realizes that the ordeal is over. This is the form of the curve for the guilty Subject B. The difference between the maximum rise in the lying period and the average pressure during the pre-lying period for Subject B is +24 mm. as compared with only +7 mm. for Subject A. This is of special interest from the fact stated above that Subject A was of the very nervous type, and it might have been supposed that she would show considerable rise in pressure due to the excitement which was very evident to anyone observing her. Subject B had herself well under control, but the suppression of the crucial facts influenced the blood pressure in an unequivocal manner. Her maximum rise occurred when she denied that she had been in Gilman Hall.

Turning to Subject A's curve we find that there is a drop instead of a rise at A when she was asked if she had been in Gilman Hall, another at B when she was asked about the bottle, and again at C when questioned about the coloring fluid. There was nothing in the situation to cause in Subject A a feeling of relief in the post-period. Her curve in fact rises, due, as she informed us, to her anticipation of the verdict.

An additional fact that throws light upon this problem of blood pressure changes is that Subject A actually lied on several occasions during the cross-examination. The lies, however, had no special significance. They were not connected with the situation, nor did she care whether they were believed or not. In fact they were such obvious lies that she must have known that they would be detected by

⁵As so frequently happens the lengthening of the reaction time did not occur until the stimulus word which succeeded the complex-arousing word was given.

all those present. For instance she said she had not been at the last meeting of the class. Since she had taken part in the experiment at the last meeting the mis-statement was very evident to the audience. There was, therefore, no suppression upon her part, and consequently no effect on the blood pressure.

SUMMARY

The following conclusions, although drawn from only one test, are offered as suggestive:

1. The average reaction time of the guilty subject to the crucial words of the test was considerably larger than the average reaction time to the non-crucial words. The mean variation of the former was larger than that of the latter. This occurred in spite of the fact that the guilty subject was of the restrained and controlled type, and so far as outward appearances are concerned, made every effort to deceive.

2. In the word reaction test for detecting deception the reaction time and mean variation are more reliable factors than a qualitative analysis of the reaction words. This conclusion is based not alone upon the results of this experiment, but upon those of a series of tests conducted each year in the class room.

3. The innocent subject was much more nervous than the guilty subject. Nevertheless during the cross-examination the blood pressure of the guilty subject rose considerably higher than that of the innocent subject. This result answers the frequent criticism of the test that a nervous witness under cross-examination will show the physical symptoms of guilt.

4. The innocent subject told several lies during the blood pressure test. She knew, however, that the prevarications were obvious to her auditors. The fact that these lies did not cause the characteristic rise in blood pressure seems to support the assumption that suppression, which is an essential part of the deception consciousness, is a cause of the rise.

Subject A					
Reaction Word	Reaction Time		m. v.		Stimulus Word
	Non-Cru.	Cru.	Non-Cru.	Cru.	
win .....		.7		1.17	<i>whiskey</i>
play	1.		.5		<i>theatre</i>
dog .....	.9		.6		<i>drag</i>
run		1.3		.57	<i>bottle</i>
bottle		1.3		.57	<i>label</i>
beach		1.6		.57	<i>rye</i>
architect	1.7		.2		<i>build</i>
church	1.1		.4		<i>ceremony</i>
egg	1.1		.4		<i>chicken</i>
bottle		1.2		.67	<i>container</i>
clock		1.2		.67	<i>shelf</i>
whiskey		1.2		.67	<i>Scotch</i>
dress .....	.9		.6		<i>pattern</i>
apple	1.1		.4		<i>orchard</i>
ink .....	.9		.6		<i>blotter</i>
telepathy	1.7		.2		<i>mental</i>
gold	1.2		.3		<i>silver</i>
dress	1.1		.4		<i>hat</i>
mining	1.4		.1		<i>industry</i>
wood		1.4		.47	<i>alcohol</i>
fire		1.9		.03	<i>destroy</i>
goods		4.3		2.43	<i>manufacture</i>
postman		2.2		.33	<i>mail</i>
philosophy	1.9		.4		<i>textbook</i>
knife	1.6		.1		<i>sharpen</i>
money	1.3		.2		<i>fortune</i>
blue		1.5		.37	<i>coloring</i>
sulphuric acid.		1.6		.27	<i>dilute</i>
dog		1.8		.07	<i>shake</i>
house	1.2		.3		<i>Agassiz</i>
mountain	1.2		.3		<i>climb</i>
watch		5.1		3.23	<i>Gilman</i>
training		1.6		.27	<i>physical</i>
mail		1.8		.07	<i>letter</i>
train	1.7		.2		<i>break</i>
appendicitis ...	1.3		.2		<i>operation</i>
engine	1.6		.1		<i>accident</i>
mother	1.2		.3		<i>children</i>
physician		2.1		.23	<i>remedy</i>
water		1.4		.47	<i>thirst</i>
tree	1.7		.2		<i>flower</i>
ceremony	1.4		.1		<i>church</i>
dope	3.2		1.7		<i>morphine</i>
car	4.3		2.8		<i>automobile</i>
intoxicated ...		2.		.13	<i>liquor</i>
magazine		2.1		.23	<i>newspaper</i>
death		1.8		.07	<i>poison</i>
Radcliffe		2.3		.43	<i>Brown Nichols</i>
heat		1.5		.37	<i>radiator</i>
hide		1.8		.07	<i>conceal</i>
Average	1.50	1.87	.464	.575	

Subject A

Crucial Difference (av. cru. R. T. - av. non-cru. R. T.) = + .37
 Crucial Difference expressed in per cent. of av. non-cru. R. T. = 24%
 Mean Variation Difference (m. v. of cru. - m. v. of non-cru. R. T.) = + .111
 Mean Variation Difference expressed as per cent. of non-cru. R. T. = 7 1/3%

Subject B

Reaction Word	Reaction Time		m. v.	
	Non-Cru.	Cru	Non-Cru.	Cru
alcohol .....		.2		.07
people	1.4		.21	
net	1.1		.09	
cork		1.2		.73
paper		1.4		.53
wheat		1.3		.63
house	1.1		.09	
minister	1.1		.09	
rooster	1.1		.09	
tin		1.3		.63
wood		1.3		.63
English		1.3		.63
paper	1.1		.09	
tree	1.2		.01	
paper	1.2		.01	
test	1.2		.01	
dollar	1.1		.09	
coat	1.1		.09	
busy	1.3		.11	
whiskey		1.5		.43
paper		1.6		.33
articles		2.5		.57
female		1.2		.73
Langfeld	2.2		.29	
knife .....	.9		.19	
teller	1.		1.01	
ochre		1.9		.03
ink		3.4		1.47
bottle		2.5		.57
house	1.2		.01	
tree .....	.9		.29	
street		2.1		.17
chemistry		1.4		.53
write		1.6		.33
stone	1.1		.09	
moving picture.	1.1		.09	
car	1.5		.31	
grown-up	1.4		.21	
doctor		1.6		.33
hunger		1.1		.83
garden	1.		.19	
minister	1.2		.01	
opium	1.		.19	
chauffeur	1.3		.11	
bottle		5.9		3.97
print		1.8		.13
iodine		3.		1.07
Garden St. ...		1.8		.13
heat		2.1		.17
hide		1.4		.53
Average	1.19	1.93	.159	.646

m. v. = mean
variation
non. cru. = non
crucial
cru. = crucial
R. T. = reac-
tion time

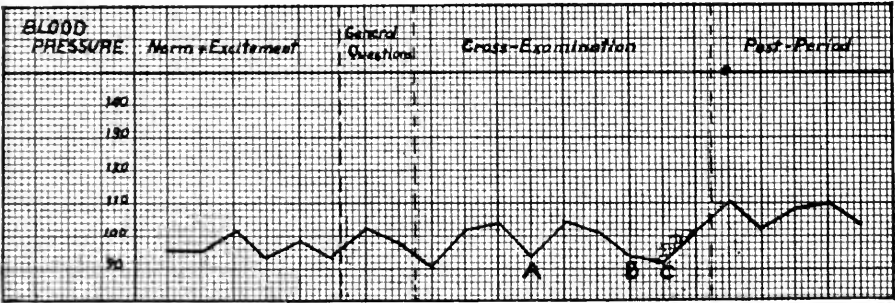
Crucial Difference (av. cru. R. T.—av. non-cru. R. T.) =
Crucial Difference expressed in per cent. of av. non-cru. R. T. =
Mean Variation Difference (m. v. of cru.—m. v. of non-cru. R. T.) =
Mean Variation Difference expressed as per cent. of non-cru. R. T. =

Subject B
+ .83
62%
+ .487
41%

CHART I

Subject A

Blood Pressure

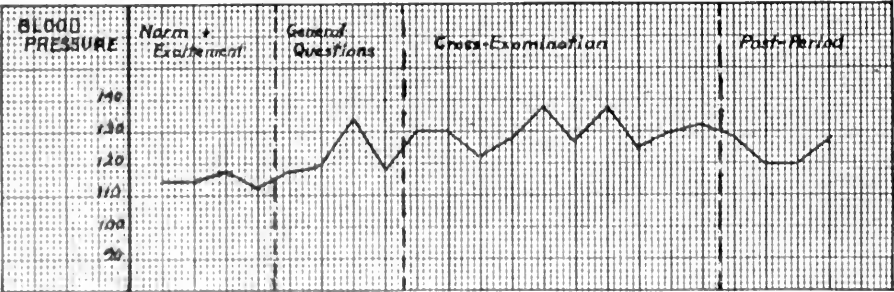


Average norm excitement 97 mm
Maximum rise during cross-examination 104 mm
Rise 7 mm

CHART II

Subject B

Blood Pressure



Average norm excitement 114 mm
Maximum rise during cross-examination 138 mm
Rise 24 mm

MYSTICAL ECSTASY AND HYSTERICAL DREAM-STATES

BY CAVENDISH MOXON, M. A.

LOS ALTOS, CAL.

THE mystics are the source and stay of all religions. The psycho-analytical study of mysticism is therefore an important aid to an understanding of the normal and the morbid religious experience. The mystic ecstasy manifests in an extreme form the unconscious forces that lie behind all religious life. The strange form and the enormous extent of the mystical writings are a great obstacle to the non-mystical investigator. It is therefore a matter for gratitude that this work has been undertaken by a competent psychologist who has published his result for all to use. I refer to the valuable "*Essai sur l'Introversion Mystique, Etude Psychologique de Pseudo-Denys L'Areopagite et de quelques autres Cas de Mysticisme*" by Ferdinand Morel, doctor in philosophy of Geneva University. After briefly summarizing Dr. Morel's conclusions I propose to show how his psychoanalytic theory of mysticism is supported by the psychoanalytic practice of Dr. Abraham and others.

Under the symbolic differences of eastern and western mystics Dr. Morel finds a universal tendency to introversion and regression. Like the Indian mystics, Pseudo-Dionysius, for example, has in an extreme form the desire for peaceful phantasy and escape from reality. The spiritual world is valued by this typical speculative mystic according to the degree of introversion attained. Men are on the lowest level. Angels are a stage higher than men, but they still show some interest in human affairs. After angels come celestial beings rising step by step till, at the top, the thrones are filled with ecstatic ardor for God. Dr. Morel discovers that the more the libido regresses from the external world, the less frequent become the material symbols in the mystic's writings. When the stage of ecstasy has been reached these symbols of objects or ideas are almost entirely replaced by the functional symbols of psycho-physical movement and desire.

It is important to notice that the regressive tendency and the lack of interest in reality, the homosexuality and phobia of the opposite sex, the masochism and timidity often appear in the mystic's early years; and, in Dr. Morel's opinion, these inborn tendencies of the mystics have been developed by an education and environment which

happened to favor the original libido trends and hinder a free development of a normal sexual life.

Nothing less than a return to the intra-uterine condition can satisfy the desire of Dionysius to bury himself in a state of not-being. Consequently he interprets baptism to mean a rebirth from the mother's womb. The initiation of a monk, he highly esteems as the way to solitude; and solitude, as we shall see below, is ever desired by the auto-erotic and the narcissist. Mystic ignorance is praised because it leads to the desired pleasure found in the functional consciousness of ecstasy when the outside world is entirely shut out. Dionysius has no desire for an absolute unconsciousness. The light is ever his ultimate aim. The darkness, the ignorance, is but a threshold, a zone of psychic oscillation between the two worlds, a state in which the subject-object relation has not been entirely passed by the libido. For St. John of the Cross the mystic night of the soul is like the darkness before the dawn. "Before being supernaturally transformed, the soul without doubt needs to annihilate itself in the darkness, and to escape from the limits of its natural and reasonable life of the senses." Likewise the will not to know is but a means to the pleasure of "*une élévation voluptueuse à la source surintellectuelle de L' amour divin.*" When the mystic allows himself to be conducted across this threshold he suddenly comes into the ecstatic light. The centripetal aim is achieved, the mystical union beyond all expression is won, the ecstasy is enjoyed for an instant. The fixity of a moment empty of all change gives the mystic the illusion of eternity; he feels himself *sub specie aeternitatis*.

Dr. Morel finds the ecstatic experience to be bi-polar. God is a projected image of the narcissistic libido; a fixed pole round which the desire moves until it attains ecstatic unity and momentary rest. The Indian desire for Nirvana likewise implies a regression to the mother. The very position of the body in the Indian prescription for the production of ecstasy imitates the intra-uterine state. According to Tauler, the mystic has a longing for the created to regress into the un-created, for "*die Entrückung und der neugewonnene Zustand.*" And we shall find the same word '*Entrückung*' used of an analogous psychic state by Dr. Abraham following Dr. Bleuler. Eckhart expresses the deification of the ecstatic ego thus. "God and the soul are so unified that no creature, not even the angels can discover any difference between them."

Bernard of Clairvaux is an example of a more orthodox, because

less regressive type of mystic. He was so dominated by his Oedipus complex that he developed an excessive cult of "Notre Dame" and puzzled over the difficulty of being at once a man and also "in utero matris." A phobia of all other women and a homo-erotic relation to Jesus followed. Bernard's masochistic identification with Mary appears in his exclamation a propos of the wound of Christ which pierced Mary's heart: "I should count myself happy if I sometimes felt myself pierced by the sword's point in order that I also could cry: I am wounded by love." Bernard experienced certain brief sleeplike states which he describes as "vigil vitalisque sopor—rara hora et parva mora—O si durasset!" Bernard attained a primitive stage of object love and his desire for both male and female objects of worship expressed the oscillations of his strong bi-sexual trends. In Suso the anxiety which is so constant a symptom of auto-erotic activity is specially prominent.

Mystical women lack the male mystic's power of entirely emptying the material consciousness and also the desire for annihilation in the mother. Therefore they never reach the extreme regressive stage of the Yogis and Dionysius. Female mystical erotism is marked by a precise and anthropomorphic character and by frankly organic enjoyment of God in contrast to a more abstract vision of God sought by male mystics.

It is the typical course of the ecstatic state, as seen for example in Dionysius, that interests us here; the turning away from reality, the gradual ascent to another world through obscurity to a sudden and momentary thrill of emotional unity. Dr. Morel makes clear the sexual nature of the whole experience, which implies a regression to an infantile manner of erotic satisfaction. And he remarks that the tendency to peripheral occlusion is not without analogy to the state preceding sleep, in which Freud has noticed momentary manifestations of narcissism. Accepting the dictum that the neurosis is the negative of the perversion, Dr. Morel thinks the mystics may have made their ascetical renunciation as the only way of avoiding both a sexual perversion and a more developed form of neurosis or psychosis.

The hysterical nature of the mystical states of ecstasy has gained a striking confirmation from the recent psycho-analytic study of hysteria. Perhaps the most relevant is that of Dr. Karl Abraham in cases of hysterical dream-states in the *Jahrbuch für Psychoanalytische und Psycho-Pathologische Forschungen*, 1910. Dr. Abraham has

found that in each case there was originally a strong tendency to day dreaming, and that the hysterical dream-state was preceded by a stage of phantasy and exaltation. The primary day-dream passed into a second state of dreamy *Entrückung* or ecstatic feeling of rapture in which the familiar environment seemed unreal, and strangely changed. The patients themselves felt as if they were "in a dream." The third stage was an emptying of consciousness: a checking of the course of thought. At the conclusion of the state of emptiness occurred a fourth stage, marked by feelings and phantasies of anxiety and depression. The experience was described by these patients as pleasant until the last stage appeared.

One man suffering from severe hysteria had such an anxiety about leaving the house that he became unfitted for business and social life. Whenever he was made to feel his own inferiority or incapacity, he regularly reacted by falling into a dream state. His agoraphobia reminds us of the same affect noticed by Dr. Morel in the life of the mystics. The patient described his dream-state as at first an ever increasing "Enthusiasmus." This imperceptibly passed over into the second stage of complete introversion; a shutting out of all external impressions. "In the phantasy," he declared, "one loses the ground under one's feet." Even his own body now seemed strange and unreal. The third stage immediately followed with its complete cessation of thought which led to the fourth state of extreme anxiety and weakness. Sometimes he tried to come down "as from a cloud" before the unpleasant end was reached. The word "cloud" is noteworthy: it points to the feeling of a clouding of consciousness which corresponds to the dark shadows of night and to the nescience through which the mystics pass to the ecstatic light.

The hysterical patients who had masturbated in childhood, waged a continual war in later years against this habit. Finally a compromise was found in the form of the periodic dream-states briefly described above. As the day-dreaming had been the prelude of their masturbation, so now it forms the first stage of the substitutionary dream-state. The second stage of rapture and isolation corresponds to the growing erotic excitement; and the emptying of consciousness symbolized the height of the orgasm at the moment of ejaculation. The anxiety and weakness that follows make the correspondence perfect. The feeling of isolation goes back to the masturbator's boyish desire to be alone with his phantasies. The disappearance of thoughts corresponds to the more or less complete loss

of consciousness which is specially apt to occur at the height of his sexual excitement. Some of these hysterical cases, moreover, show a bisexual fixation of libido which is parallel to the frequent mystical identification with both Jesus and Mary. And the passive attitude of the patient to both libido projections has its counterpart in the religious dependence of men like St. Bernard. To the neurotic fancy of the hysterical patient, merely to walk alone out of the home meant giving up his heterosexual incestuous relation and falling into his homosexual temptation. So he called up anxiety to replace desire, and fancies of grandeur to give self-respect. Here we are reminded of the limitless self-centredness of mystics who did not hesitate to identify themselves with God, i. e. with the projection of their beloved ego. Dr. Abraham noticed that the dream-states of his patients satisfied the impulses to aggression and exhibitionism: Dr. Morel noticed the possessive and jealously exclusive love of the mystics and their desire for spiritual nakedness at the time of their ecstatic vision of God. And the double hysterical desire to remain a child and to die is fully expressed in the mystic symbolism. One patient could induce his dream-state by a strong act of will not to think of anything in the external world, just as the mystics induced their ecstasy by "amor nescire" and "docta ignorantia." And the hysteric describes as if he were a mystic the short stage of pleasure like an eternity accompanied by a feeling of introversion and alteration. One of Dr. Sadger's patients described the feeling that preceded his hysterical loss of consciousness thus: "the feeling of going back in the swing" (which had excited him as a child and was doubtless linked to the previous joy of being rocked by his mother) "is just the same as the falling asleep in the absent-state which always seems to me to be the highest form of joy." He then expresses the wish of St. Bernard for an eternity of the brief moment of ecstatic "sleep"—"if only one could fall asleep in this way for an eternity!" By drinking alcohol this patient could induce the trance state in order to indulge therein his homo-sexual desire to be nursed and cared for by his comrades. Likewise the mystics, by taking a narcotic in the form of a mental discipline which narrowed the attention to a point, could satisfy their similar unconscious desires.

Dr. Pfister relates the case of a girl whose religious experience was a cloak for her auto-erotic activity. "One day" she told the analyst "I was pondering on the text, 'There is no fear in love but perfect love driveth out fear.' I said to myself, 'Let everything go;

yield yourself only to the father.' Half unconsciously I did the evil deed. I was not ashamed. I went right to sleep. I found myself in the twilight state. During this mental state, it is again like the time when I did the forbidden thing; at that time I was as if in another world." (The Psychoanalytic Method, p. 131). A total loss of material consciousness is impossible in the prolonged twilight-states, which are therefore hidden from the censor by the subsequent total amnesia.

The states described above give essentially the same unconscious satisfaction to mystics and hysterics alike—a symbolically mediated identification with the mother, a narcissistic and homosexual activity. Hence both mystics and hysterics often fail to express adequately the meaning of their rapture, the obscuration of external reality and the expulsion of thought by their affective state. An exception was Dr. Sadger's hysterical patient who during the analysis remarked upon the strange looks in a monk's eyes, which appeared absentminded, far away from this world and pre-occupied by a phantasy which the hysteric felt to be caused by the same sexual need as produced his own absent-states.

The mystics, we conclude, are a sub-class of hysterics. The mystic ecstasy corresponds to the four stages of the dream-states—the primary tendency to phantasy, the consequent will not to know the world, the progress through the dark night of the soul to the ineffable depths of light and the exhaustion that follows the ecstasy. We must therefore posit in the mystics as well as in the hysterics a primary auto-erotic or narcissistic activity, a secondary repression, and a final return of the repressed activity in the sublimated or spiritualised form of a religious experience or a mystic ecstasy. It also follows that the mystics' claim to sexual abstinence is only justified in so far as it is true that they have no desire for, but rather a phobia of normal sexual intercourse. For the undeveloped or regressive libido of neurotics, the mystic symbols open the way to an indulgence which is exquisitely satisfying to the self and also highly esteemed by the faithful who regard the state of ecstasy as the distinguishing mark of a saint.

THE KIND OF MEN IN STATE PRISON

BY A. W. STEARNS, M. D. AND JOHN V. CHAPMAN

DURING the year beginning May 1, 1919, and ending April 30, 1920, there were admitted to the Massachusetts State Prison at Charlestown, 107 men. All had been convicted of a felony, and the shortest sentence was two and one-half years. From the above statement it will be seen that these men have all been convicted of serious crime. A study of this group is herein made and presented.

When we review the life history of certain delinquents, it is hard to account for their conduct on the basis of normality and yet by objective methods we are unable to demonstrate mental disease or abnormality, unless we are willing to assume a criminal career in itself to be evidence of disease. When we come in contact with the environment of these delinquents and realize the adverse circumstances under which they have been nurtured, the presence of opportunities for evil and the deprivation of good opportunities, we are inclined to believe that such a bringing up is incompatible with good citizenship, and yet in this very environment we find delinquent members to be in the minority, and can readily point to many of our finest types of manhood who have developed properly, despite adverse circumstances. Thus, a proper balance of opinion is difficult, and though it can be made in general, in particular cases becomes impossible.

We shall subject this group of 107 men to scrutiny, judging them by such measures as possible. During the past few years a life history has been taken from each man upon admission to State Prison, according to an outline devised by Frank L. Randall, Esq., when commissioner. During the past year, beginning with the period of this study, a psychiatric opinion has been added to this history. An endeavor has been made to satisfy ourselves *in general* rather than in technical terms, as to what sort of a man we were dealing with, and to determine what factors in his life history and mental make-up would tend to explain his being in prison, and would be of aid in prophesying or planning his future career.

AGE

The youth of the prison population is striking, the maximum ages being 22, 23 and 24, these three years having over 25 per cent. of the admissions. State Prison comes at the end of a criminal career, and yet we find nearly two-thirds of the admissions under 30 years of age. It is difficult to account for this by current explanations of crime on the ground of abnormal personality or character defect, for, if so, where are the individuals who constituted this criminal portion of the population twenty years ago? Doubtless many have died and some have been deterred by severe sentence bringing them to State Prison. It seems likely that the turbulence and restlessness of youth itself is the explanation, in part at least, and that maturity, marriage and economic progress tend to keep older men from committing felonies.

AGES AT ADMISSION

Years	Number
17-20	12
21-25	33
26-30	23
31-35	13
36-40	9
41-45	5
46-50	5
51-55	5
56-60	0
61-65	2
	<hr/>
	107

MARITAL CONDITION

The large percentage of unmarried men is in contrast with the marital condition of the adult population in the State at large, and is particularly true of the foreign born. 55.5 per cent. of the adult population of Massachusetts is married. We cannot say whether marriage has a steadying effect upon youth or whether the steadier type tend to marry, probably both are factors.

		Per Cent.	Census of 1915
Married	32	30.8	55.5
Married, but separated from wife	9	...	...
Single	57	57.	39.6
Widowers	5	04.7	4.5
Divorced	4	03.7	0.3

EDUCATION

This compares very favorably with the general population, except for an excess of illiteracy. This illiteracy predominates in the foreign born. The 8.4 per cent. in this series compares unfavorably with 4.3 per cent. in the general population.

No education; can neither read nor write	9
No education; can read and write	1
Evening school only; can read and write	1

Common school, Two years	1
" " Five years	1
" " Six years	1
" " Seven years	1
" " Nine years	1
" " Ten years	2

Grammar School, Third grade	3
" " Fourth grade	5
" " Fifth grade	7
" " Sixth grade	2
" " Seventh grade	10
" " Eighth grade	13
" " Ninth grade	6
" " Graduates	6

High School, One year	2
" " Two years	7
" " Three years	3
" " Four years	2
" " Graduates	3

High School and business college graduate	1
High school, two years and business college	1
High school, three years and business college	2
High school graduate and medical school 2 1-2 years....	1
High school graduate and college one year	1

BIRTH PLACE

Almost exact correlation between foreign born in prison population and in the state at large would tend to disprove a common belief that serious crime is due to our foreign population. However, certain features are remarkable. About 31 per cent. of the prison population were born in Massachusetts, compared with 53 per cent. in the general population. It would appear that immigration from other states is a greater menace than from abroad, but most of these are transients and not immigrants. Again 10.2 per cent. of the prison population were born in Italy as against 3.3 per cent. outside. This holds true of the Mediterranean countries in general, as this group constitutes 16 per cent. of the total in prison. It is also noticeable that the large percentage of our population born in the British Isles contributed but one admission. Though 5.7 per cent. of our State population was born in Ireland, this group had no representation in the series. But a few years ago the British Isles contributed an important part of our prison population, so it would appear that this group has become stabilized, their place having been taken by the younger and more recent arrivals from the Mediterranean ports. These figures correspond in a general way to those of race, the exception being the negroes, who make up 8.4 per cent. of this series, to be contrasted with 1.2 per cent. of the general population. Another discrepancy is shown in citizenship, 26 per cent. of the admissions being aliens, as compared with 7.9 per cent. population at large. The nativity of parents shows 31 per cent. foreign born, compared with 32 per cent. in the general population.

BIRTHPLACE

UNITED STATES

Massachusetts	34
New York	10
Maine	4
Rhode Island	4
California	3
Connecticut	3
Vermont	3
Illinois	2
New Jersey	2
North Carolina	2
Ohio	2
Arkansas	1
Iowa	1
Missouri	1
Pennsylvania	1
South Carolina	1

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FOREIGN COUNTRIES

Australia	1
Brazil	1
British West Indies	1
Canada	2
England	1
Finland	1
Greece	2
Italy	11
Poland (Austrian)	1
Poland (German)	1
Poland (Russian)	2
Portugal	1
Russia	3
Syria	3
Turkey	2

—
33

FAMILY HISTORY

The study of this feature is rather unsatisfactory because incomplete, but our figures may be taken as the minimum.

Father intemperate	15
Insanity, feeble mindedness or epilepsy in immediate family	10
Both parents illiterate	15
Convictions in immediate family	17
Other dependency in immediate family....	19

RELIGION

Catholic	57
Protestant	40
Greek orthodox	2
Jewish	6
Mohammedan	2

MILITARY SERVICE

There has always been an excess of veterans of the army and navy in the prison population, but no causative relation can be said to exist. It tends to controvert, however, an idea prevalent in military circles that such service will reform an incorrigible. In certain cases there appears to have been a relation between the unsettling influence of service in the late war and criminal conduct.

None	66
Army	18
Navy	16
Army and navy	1
In service of foreign countries	6

How discharged

Honorable	23
Dishonorable	9
Medical	3

ECONOMIC STATUS

The handicap which seems to prevail in the prison group is well illustrated by industrial history. Steady, skilled workers are few, and that which impels to crime seems also to have an adverse effect upon industrial progress. A large number have never followed any particular occupation. Judgments in this matter are necessarily personal and opinion tentative. Classifying according to industrial progress gives the following:

Skilled	12
Experienced	44
Unskilled	24
Industrial misfits	27

According to application—

Stable	37
Shiftless	64
Idlers	6

According to economic results—

Dependent	21
Marginal	85
Comfortable	1

According to property—

Have property	10
No property	97

RESIDENCE

The large number of boarders and rovers is striking. The quality of the home is perhaps not particularly reliable, as men in general are loth to indict their home for their shortcomings.

Own home	4
Do not own home	103
Character of home good	86
Character of home not good	21

Home when committed:

With parents	27
With relatives	10
With wife	26
With woman as man and wife	4
With person as boarder	40
Stable	54
Rover	33
Intermediate	20

CRIMES

For the purposes of this study the crimes have been separated into three groups, as was first done in a prior study in 1915. This classification, according to impulse or motive, has a good deal to justify it, and has some importance in therapy. Usually the criminal career of an individual is confined to one of these groups. Many of the crimes are the same, but we have followed the rather varied nomenclature of the courts.

Sex Offences (Procreative Instinct)

Adultery	2
Assault with intent to rape	2
Assault with intent to carnally abuse female child	1
Carnal abuse of a female child	9
Carnal abuse of a female child, unnatural and lascivious act	1
Incest	2
Rape	5
Sodomy	2
Statutory rape	1
	—
	25

An analysis of the sex offenders shows that 16 were born in the United States and 9 in foreign countries, but 5 being born in Massachusetts. 7 of the foreign born were convicted of carnal abuse of a female child, 2 for incest, and 1 for sodomy. 7 of the 9 foreign born were arrested for the first time.

It is surprising that their ages are much greater than those of the entire series, over one-half being more than 30 years. This shows very clearly the effect of low cultural development and lack of opportunity for a normal sex life. These individuals differ from the general population in custom and opportunity more than in native mentality.

Murder or its Attempt. (Pugnacious Instinct).

Assault to murder	7
Assault with intent to kill, being armed with a dangerous weapon	1
Murder in the first degree	1
Murder in the second degree	8
Manslaughter	9
	<hr/>
	26

But 11 of this group were born in the United States and 5 in Massachusetts. 10 of the 15 foreign born were convicted of their first offence, while the 5 born in Massachusetts had each been arrested many times. Their ages correspond to the general figures.

This group contains over one-half the insane. Their crime, in the main, represents uncontrolled emotion, and it is obvious again that a lower cultural standard explains their conduct. The presence of most all Italians in this group would tend to point toward a temperamental peculiarity, but the lack of Italian-Americans again makes it appear more cultural than temperamental. Many of them are living a frontier life in our great cities and have kept the primitive standards of their former environment. They go about armed, expecting to personally avenge insult and protect themselves, rather than to have recourse to the slower, but more civilized judicial process.

Stealing. (Acquisitive Instinct).

Assault with intent to murder and attempt to commit larceny	2
Assault with intent to kill and attempt to commit larceny	1
Assault with intent to rob, being armed....	1
Assault with intent to rob	1
Breaking and entering	31
Escape (original sentence for stealing)....	1

Forgery, uttering and larceny	1
Larceny	7
Larceny and breaking and escaping from House of Correction	1
Larceny of auto, and robbery, being armed	1
Larceny of auto, being armed	1
Receiving stolen goods	2
Robbery	5
Robbery, being armed	1

56

The number of this group is so large that percentages correspond quite closely to the general figures. But 11 out of 55 were convicted of their first offence, and but 13 were foreign born. The mass of this group are young men giving a history of broken homes, neglected childhood and early institutional residence. They have had but short vacations out of prison, and have been through the various degrees of penal servitude, finally landing in State Prison. We might also say that they constitute a class of society by themselves. There is a certain amount of group loyalty, and their friends, employers, associates and relatives are in the underworld. They seem socially irresponsible, but whether to explain this irresponsibility by mentality on the basis of character defect, or by experience on the basis of habit, is an open question which we shall not attempt to solve. At any rate, their career represents a re-action of a particular type of an individual to a particular life experience.

MENTAL STATUS

There is a strong temptation to overstate the relation between mental disease and crime. The chief characteristic of mental disease is unusual conduct, not met with in the ordinary walks of life. This is equally true of the penal population. Whereas their conduct can be shown to be due to primary instincts, self interest is so completely abandoned, their course is so profitless, inexpedient and unwise that it is hard to explain it on the basis of normal psychology. There is a small but constant group of acute and chronic insanity, which is either unnoticed or ignored by the courts. This is usually immediately recognized upon admission to the prison, and the individual transferred

to Bridgewater. It is usually directly related to the commission of crime, and in most cases would absolve the offender from guilt, yet though transferred to a hospital, his conviction remains. The feeble-minded are found in somewhat smaller percentage than in a similar study above quoted. This is probably due to the excellent economic situation during the past two or three years. Many of the feeble-minded are no different from this class found out of prison, but habitual offenders among them should have had more attention by society than they now receive. The chronic alcoholics are usually in prison as a direct result of their drunkenness, while the drug users are more often chronic thieves, whose stealing is related to the demand for drugs. The term "constitutional inferiority" has been used to characterize a group of individuals whose peculiarities are so extreme as to warrant a belief in limited responsibility. For many years an attempt has been made to elaborate the theory which was originally contained in the concept of the moral imbecile, and terms like constitutional inferiority, psychopathic personality, etc., have been used to designate this class, and a useful hypothesis has been formulated, but no new disease entity has been isolated.

The emotional and volitional tendencies of these individuals characterized as abnormal often represent a more or less normal reaction to an abnormal situation. Confronted by conduct which we cannot explain by self analysis or by normal analogy, we assume abnormality and call this hypothetical disease constitutional inferiority or what not. This has led in many studies to a tremendous increase in this group, which one at least of the authors of this paper thinks highly improper.

No mental disease	63
Feeble-minded	13
Constitutional inferiority	13
Insane	7
Chronic alcoholic	4
Drug habitues	3
Doubtful	4

SENTENCES

There is a noticeable difference in sentences for similar offences in different parts of the State. An analysis of this would be interesting and afford grounds for constructive criticism, but the writers feel this to be outside their province and more within that of the judiciary.

MINIMUM AND MAXIMUM SENTENCES

2½	to	3	.....	9
2½	to	3½	.....	2
2½	to	4	.....	2
2½	to	5	.....	3
3	to	3½	.....	1
3	to	4	.....	4
3	to	5	.....	12
3	to	6	.....	1
3½	to	4½	.....	2
3½	to	5	.....	2
4	to	4½	.....	4
4	to	5	.....	2
4	to	6	.....	4
4½	to	5	.....	1
5	to	6	.....	2
5	to	7	.....	8
5	to	8	.....	2
5	to	10	.....	1
6	to	8	.....	5
6	to	9	.....	1
6	to	10	.....	1
7	to	9	.....	1
7	to	10	.....	6
8	to	10	.....	1
8	to	12	.....	1
9	to	11	.....	1
9	to	12	.....	1
10	to	12	.....	3
10	to	15	.....	2
11	to	15	.....	1
12	to	15	.....	1

13	to	17	.....	1
15	to	18	.....	2
15	to	20	.....	1
18	to	20	.....	1
Life	to		.....	9

DOUBLE SENTENCES

2½	to	3	and	2½	to	3	.....	1
2½	to	3½	and	5	to	8	.....	1
2½	to	3½	and	7	to	10	.....	1
2½	to	3½	and	10	to	12	.....	1
3	to	3½	and	5	to	7	.....	2

PREVIOUS CRIMINAL RECORD

As in general, a large percentage of those admitted have had previous arrests and convictions, and yet there is a substantial number of first offenders. These men form two rather separate groups in the prison. Evidence of badness in one group is given by a life time of crime and oftentimes in the other group by a single act under tremendous emotion or temptation. Usually the latter have the long sentences.

Previous Criminal Record

Arrested and acquitted	.....	2
Arrested but not committed	.....	24
Arrested and committed	.....	53
No prior arrests	.....	28

Previous Criminal Record—Number of Arrests

One arrest	.....	19
Two arrests	.....	11
Three arrests	.....	10
Four arrests	.....	10
Five arrests	.....	8
Six arrests	.....	7
Seven arrests	.....	2
Eight arrests	.....	4
Nine arrests	.....	1
Indefinite number of arrests	.....	6

Number of Terms Served

One term	17
Two terms	11
Three terms	8
Four terms	6
Five	3
Six terms	5
Seven terms	2
Indefinite number of terms	1

Probation	32
Juvenile reformatory	8
Adult reformatory	15
Both juvenile and adult reformatories.....	13

One or More Prior Terms at Massachusetts State Prison

One term	9
Two terms	3
Four terms	1

Have Served Prior State Prison Terms Anywhere Including Massachusetts

One term	12
Two terms	5
Three terms	1
Four terms	1
Five terms	1

SUMMARY

I An analysis is made of 107 admissions to the Charlestown State Prison.

II Crimes involving sex or personal violence, devoid of intention to steal, represent uncontrolled emotion, and are explained on the ground of low cultural development rather than mental disease or criminal habit.

III The relative youth of the population would tend to show criminal conduct to be due to neglected social problems among young men, rather than to permanent mental disease or traits.

IV Stealing lacks the emotional element found in other crimes and is more apt to be due to mental defect or criminal habit. The group of individuals in this class while receiving the shortest sentences seem to present a greater menace to society than those committing legally worse crimes and receiving longer sentences.

V 33 out of 107 present mental abnormality enough to warrant this fact being considered in the treatment of the case.

VI The foreign born as individuals do not form an essential part of our permanent criminal problem.

VII The present temporary institutional care of delinquents does not effectually cure the individual or protect society.

VIII A medico-sociological study of individual delinquents forms the most rational basis for treating the individual and for formulating methods of care, and is inadequately applied.

EDUCATION AND FREUDIANISM

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PART I

The Freudian Mechanisms and The Conditioned Reflex

THERE have been appearing of late a number of books which purport to treat the psychology of childhood from the angle of the new psychology.¹ Of these the latest and most uncompromising is perhaps the book of Wilfred Lay entitled "The Child's Unconscious Mind; the Relations of Psycho Analysis to Education." (New York, Dodd, Mead & Co., 1919). As the terminology and treatment of which this book is typical seems to be creeping into every day educational psychology, it seems worth while to examine it and the presuppositions upon which it rests, in order that educators may be spared a possible new fetish.

Chapter I contains an important statement, "The hypothesis adopted in the newer psychology, which is that tentatively presented here as a basis for a newer science of education, is that the *unconscious portion* of each human mind, child or adult, is an activity which plays an extremely important, if not an exclusively controlling, role in the life of every individual." The subconscious influences our every action, and occasionally catches us off our guard, as when we make mistakes and blunders. Lay gives a case of his own where he set the alarm clock to "silent" by mistake. This, he says, was *due to an unconscious wish to sleep longer in the morning*. Forgetting has a purpose, which is rooted in the unconscious. Besides, then, (Ch. II) our conscious life, there is this unconscious stream which

¹We may mention Healy's books, e. g., *Mental Conflicts and Delinquencies*, of the older school, H. Addington Bruce, *Psychology and Parenthood*, (New York, 1915, Dodd Mead & Co.), as of a definitely Freudian tendency. Pfister, *The Psychoanalytic Method*, is uncompromisingly Freudian. Adler, "The Neurotic Constitution," has definitely educational implications which are taken up by Lay. White's "Mechanisms of Character Formation" should also be mentioned as applying Freudian conceptions to educational problems. There is also a lengthy section on Educational Implications in Ernest Jones' book referred to below. Hug Helmuth "Die Seelenleben des Kindes" should also be mentioned, and likewise "Echo Personalities" by Frank Watts, which professes to be "A short study of the contributions of abnormal psychology towards the solution of some of the problems of normal education." Cf also Elida Evans "The Problem of the Nervous Child."

is more truly our personality than the conscious part of ourselves. For often we do not know either what we really want (i. e. what our unconscious wants) or what we really are. Chief among our unconscious wants are the trends of sex. These strong tendencies are, by social convention, relegated to the psychological limbo of the unconscious by the activities of the Censor (p. 107), which is the Charon of the psychological underworld, deciding which of the wishes shall be allowed to cross into consciousness, which shall be kept unconscious. Between, then, conscious and unconscious there is continual interplay or conflict, some of the conscious wishes sinking back into the unconscious, and vice-versa, some of the unconscious wishes escaping into the conscious, openly or by various disguises. This conflict is conducted by means of various mechanisms, of which the principal are the Censor, already mentioned. Identification, Projection, Introjection, Compensation, Sublimation, Rationalisation, Symbolization. These will later be dealt with in detail, but it may here be mentioned that the danger of the whole movement is exactly in their terminology, which seems in careless hands to approach perilously near a new Faculty psychology. The unconscious is considered as formed largely by the individual's early experience. Unconscious wishes thus created play a large part in later life, especially those wishes connected with early sexual experiences (p. 33). It is then the object of education to guard the child from the formation of harmful wishes and at the same time to see that he has at command the best means of tapping his subconscious power.

This is the general theme of the book. The latter part, as following more or less as an educational corollary from the first, has been treated very briefly, but will be dealt with more fully where it belongs. Now this is not the place for a detailed examination of the theory of psychoanalysis. That the method is often successful when applied by a capable physician there is no doubt. Otherwise it would not have been practiced for twenty centuries by the Catholic Church. On the other hand it is very probable that the success attained is due often to causes unsuspected by the analysts themselves. With the facts brought forward by this group of able clinicians we have little quarrel. But when they adduce as a theoretical substratum of their facts a variety of new psychical processes, and build up therefrom an entirely new theory of child and adult psychology, it seems time for an examination. But, let the issue be quite clear. That the classification of actions under the caption of compen-

sation, rationalisation, etc. is practically useful we do not deny. Our quarrel is with the rapidly growing tendency to take these classifications, spell the names with capital letters, and create a new series of psychological entities, a whole mythology, looking to become as obstinately established as were ever the magically endowed Association, Apperception,¹ Instinct and the like. It will be our purpose to take these Freudian mechanisms as they are actually found in children and adults, and to show that they are not entirely new and ultimate processes now first brought to light by the school of Vienna, but that they are all explainable in terms of one common phenomenon, viz., the conditioned reflex. This will mean that the nomenclature has a clinical, rather than a theoretical value; the clinical value we do not deny, but rather endorse.

THE COMPLEX

One of the most frequent terms in the more modern psychology is the term complex. It occurs frequently in the book of Lay's which we have just been discussing and in the work of Pfister on which it is modelled. Pfister quotes Jung as understanding by an "emotionally toned complex,"² "a group of ideas held together by a definite affect," and notices (p. 151) that some complexes are held together by an "intellectual bond." Freud describes the complex as a "group of ideational elements belonging together, invested with affects,"³ and, as is to be expected the complex is described as having two parts, viz., conscious and unconscious. Bernard Hart⁴ (p. 61) says "such a system of emotionally toned ideas is termed in technical language a 'complex.'" The connection between the complex and the conditioned reflex was pointed out by Prof. E. B. Holt. Jelliffe,⁵ p. 138, states "The term 'complex' is a certain definite series of these conditioned reflexes." The word "series" is misleading. It implies something far too simple. "Concatenation" would perhaps better describe the facts, but even this term is metaphorical and apt as such to lead to difficulties. We prefer to retain the more noncommittal term "system." A complex is in fact, nothing but a system such as we

¹See Ch. XIV. W. James. *Talks to Teachers*.

²The Psychoanalytic Method. Moffet Yard & Co., New York, 1917.

³Über Psychoanalysis, p. 30, quoted by Pfister.

⁴The Psychology of Insanity, New York, G. P. Putnam's Sons, 1912.

⁵Technique of Psychoanalysis, (Nervous and Mental Diseases Pub. Co., New York, 1918)

have described. Hitherto, until lately, defined in terms of "ideas" it is now brought down to terms of stimulus and response. But now a further question comes up. Pfister notices that the "ideas" of the complex may be held together by an "intellectual bond"; but himself defines the complex as "a coherent group of ideas, emotionally toned, which has fallen wholly or in greater part to the unconscious."⁶ That is to say, he makes an emotional colouring essential, as does Hart. And yet the latter gives examples where the "emotional tone" can only be seen by a deliberate assertion that it is there. For example, he takes a hobby which he asserts is "a system of connected ideas with a strong emotional tone." It may be that some hobbies may be thus described,⁷ but certainly the "strong emotional tone" in gardening, swimming and newspaper cutting is hard to find. Many people take up gardening because of the small emotional strain involved. Pfister again speaks of a "pregnancy complex" and "a money complex" as instances of the "intellectual bond." It might well be questioned as to whether he is right in denying emotional tone to these cases, but in any case it is hard to see what he means by "intellectual bond." The whole difficulty is this: What holds the "complex" together? In the vast majority of clinical cases there was an emotional element, and naturally, for unless the patient were profoundly disturbed in some way, the doctor would not be consulted. And profound disturbance almost always means emotion. But in our view the emotion is only one of the elements of the total reaction, which is *held together as a whole* because it is ideally a reaction to a number of stimuli originally simultaneous or overlapping. The emotionally toned complex of the Freudians and others is only a special case, namely that case which has most come under clinical observation. In ordinary life it is far from being the most important. The point is significant because it shows the danger of adopting whole heartedly a psychology which is based on pathological cases, and the psychology which is unfolded in Lay's book and in Pfister is almost wholly thus derived. The result of the emotion—complex theory has been to lay far too much stress on the emotions of children. The wonder is that with strong emotions tied on to practically all of their organized actions a child ever manages to survive the nerve racking ordeal of a day's play! A complex is then a system of conditioned

⁶loc. cit.⁷e. g. golf and politics.

reflexes such as we have described,⁸ and it is held together not necessarily by its emotional tone or "affect" but by the principle of the simultaneity of stimuli. The emotional "unconscious" complex dealt with by the Freudians is a very particular case, and it is quite inadmissible to argue therefrom as to the general nature and effects of complexes.

COMPENSATION

This is the mechanism whereby a trend which is in opposition to another gains strength to enable it to perform the extra work due to the fact that it is in opposition. It is "an exaggeration or over-development of conscious or foreconscious trends serving as a defense against unconscious wishes of an opposite character which threaten to break into consciousness."⁹ The phenomenon is so called because of analogy with physiology. "Defect or deficiency in some organ is made up for by an over-development and increase of functional activity on the part of the same organ or of its mate. Thus the effect of a leaky heart valve is discounted by an increase in the frequency of the heart's action; disease or removal of one kidney results in an increase in size and functional capacity on the part of the other kidney, etc."¹⁰ It may here be remarked that even in the physiological sphere there is nothing recondite, no mysterious law of natural "Compensation." When the organism's heart valve is damaged, the state of the blood and the other stimuli to the heart beat act on the heart just as before, only now the blood goes into the stimulating state a little quicker, all the stimuli are a little nearer together in time than before. Hence the heart beats quicker. Further, it being a physiological principle that muscle grows by use, the heart muscle grows where the organism is in a sufficiently plastic state. If the organism cannot "stand" the quicker heart beat, it dies. Here is no wonderful physiological process other than the simplest and most wonderful of all, the action of stimulus and response and the growth of muscle by use. Similarly for the example of the kidneys.

Psychically, the stock example is that of the misogynist who, disappointed in love, hates all women. Having found it necessary to inhibit his affection for one woman by a hatred of the same women,

⁸G. Humphrey. *The Conditioned Reflex and the Freudian Wish*. This Journal, Feb., 1920.

⁹Freud, *Morbid Fears*, New York, Moffat Yard & Co., 1918, p. 129.

¹⁰Ibid.

he has allowed the hatred to spread to the species. It is to be noted, however, that his hatred is, in a measure, indicative of the strength of his former affection. Everybody recognizes that he must have been very badly treated to make him what he is today. Timon of Athens would not have become a misanthrope had he not been a philanthrope before. This is all perfectly "conscious." Timon would himself know and consciously admit that it was his very love that had turned to hate. There is in fact nothing peculiarly "unconscious" or even "fore-conscious" about the mechanism of compensation. It functions equally well with conscious or unconscious material. But those cases are the more picturesque where the organism is unconscious on the one side of the process, and so cases of this class have received more attention. Many examples are given in the psychoanalytic literature. Frink mentions the "exaggerated anxiety so often displayed by neurotics over the health of some person near to them. "Thus for example a girl is in a continuous state of alarm about her mother." If her mother complains of being over tired, the girl thinks this presages an apoplexy. If the telephone rings while her mother is out, she thinks this is a message from the police saying that her mother has dropped dead on the street." Frink states that in this case the nervousness was not a sign of great love for her parent but rather of wishes directed against her mother, but which she had suppressed. Similarly in the case (p. 130) of the married woman who could not let her children out of her sight, and was consumed with fear for them on the slightest provocation. The course of treatment brought out the fact that she was unhappy with her husband but could not leave him because of the children. Hence, she "unconsciously wished that they might die." Other interesting examples are those of a young woman who espoused Christian Science as an antidote to a disappointment in love. The object of her affections had turned out to be worthless, so that she had "turned her mind from the bad to the good." There is the case of the woman who became an ardent feminist, really taking pleasure all the time in being "bullied" by men. These instances are, according to Frink, of actual occurrence. It is noticeable that in spite of the theory of the role of the unconscious in compensation, in no less than two of the four cases given as examples the trend for which compensation is made is undoubtedly conscious; in a third case, that of the married woman, she "had allowed herself to think that if she had no children she would leave him, (i. e. her husband). Frink's own statement that "the repressed trends . . .

are derived from instinct and the unconscious" is not true of his own examples. We shall have occasion later to comment on this unnecessary dragging in of the unconscious at every step. We note in passing that, as in the case of emotion and the complex, the fault comes from the fact that the theory of the unconscious has been built up by the clinicians, who naturally meet more cases of "suppression" of unconscious than conscious trends. A man does not go to the mental physician about his own conduct when he himself can explain it.

EXPLANATION OF COMPENSATION

Enough has been said to indicate what is meant by the Freudian mechanism of compensation. How is it caused? Is it a mysterious psychic process the object of which is in normal cases to preserve mental balances and which in abnormal cases *over* balances? Consider what takes place in the first example given, that of the girl with a morbid anxiety for her mother. Here we have two confronting systems of conditional reflexes: First a system centering round her mother and prompting her to protect her in every way she can. This has perhaps been formed by years of service for her mother. It has become so habituated that the sight of the mother or the sound of her voice is the stimulus for certain sympathetic emotions, these having accompanied the thousand and one little ministrations of years. Her whole attitude towards her mother is one large conditioned reflex of service, of doing things for her. Practically every relation into which the two women enter has this one sided character. When the older woman moves in bed, it means that she is uncomfortable and the sound acts as a stimulus for the daughter to run and straighten out the pillow. When the mother sighs and says she is warm, the daughter opens the window. And so through all the gamut of daily life, a stimulus from the mother means distress on the one side, and sympathetic help on the other. Such relationships are common in everyday life. Almost wherever there is a chronic invalid there is to be found similar state of affairs. A baby during the first few years of life is in exactly the same position. European servants have the same attitude towards their "betters." Almost always the position is found in houses where a grown up daughter has continually lived alone with her mother from childhood.

Now into our family there enters a different factor. The daugh-

ter, growing up, desires to marry, and her mother opposes the match—it is easy to see why. But this new system is not strong enough to break through the old. It is to be noted that she obeys her mother when the latter opposes her marriage. The old relation of “distress-help” still obtains, and in the nervous tension of the situation is a little exaggerated, the inhibitions always being the first to go when the smooth running of organism is disturbed. The girl still interprets news from, or other stimuli connected with, her mother as meaning that some kind of trouble has come to her parent. If her mother is out longer than usual it means that something has happened to her, and so on through the rest of Frink’s illustrations. It must be remembered that the girl is in a nervous state, which means that her inhibitory system is lowered in tone, so that reactions which would normally be blocked by the counter reflections of common sense are now operative. There is no need of a mystical faculty of Compensation here. All that the example shows is that a very pronounced protection-system (complex) may be strong enough to conceal an aversion-system. The Freudians are quite unjustified in maintaining that “she really wishes for her mother’s death, and her affection is only ostensible.” There is no reason why the unconscious motive should be any more “real” than the conscious. That is part of the great Freudian assumption.¹⁰

In the light of what we have said the second example, of themother with the solicitous care for her children, becomes clear. Here again, we have a protection system which functions, probably, perfectly normally until the wife’s feelings began to be estranged from her husband. Then followed a period of nervous tension bringing a “lowered resistance” to stimuli, i. e. lowered inhibitions, and the solicitude is exaggerated, along, no doubt, with her reaction to noises, pain and to everything else which is normally inhibited in a certain degree. That was probably why she went to the doctor. There is here no need to hypothecate Compensation, any more than in the other case. There seems certainly no need to attach a far reaching importance to the fact that she “had allowed herself to think that if she had had no children

¹⁰It may appear that we have read into the domestic affairs of the two ladies more than is justified. A certain amount of “reading in” is necessary and we have not read in so much as has Frink whose Freudian hypothesis compels him to believe: (1) That she *wished* her mother to die. (2) That this followed as consequence of her having in childhood wished her mother to die so that she might marry her father. (3) That her unreasonable worries about her mother *compensate* for the instinctive wish that her mother would die, i. e. that the *cause* of her worry about her mother is her aversion for her mother.

she would leave him." Probably every mother at some time or other has "wished that she had no children"; but that does not cause neurotic symptoms.¹¹ The two cases of "Compensation" that we have so far examined prove merely that the stronger of two impulses to action determines the course of action (which is *ex hypothesi* true, for that is what we mean by the stronger in this connection), and that further a strong motive may conceal a weaker one operative in another direction.

Take now the case of the woman who, after a disappointment in love with a doctor took to Christian Science, and "alternated between preaching its doctrines and railing at doctors in a quite fanatical manner until at last she broke out with neurosis." Here we have a certain set of emotions, viz., of anger and aversion, for which a doctor is the stimulus. This, by ordinary conditioned reflex, becomes operative at the stimulus of the word "doctor,"—in other words, it is generalized. From this to active identification with a society which is avowedly opposed to doctors is a short step. Here psychoanalysis revealed the fact that she had previously been in love with the doctor, who had disappointed her. There is again no need to postulate "Compensation."

The last case is slightly different. Here we have to deal with a woman who delighted in being bullied by the other sex. On the other hand she was ashamed of this part of her nature, and struggled to resist it. Following James' advice, she joined a society. Here again, the strongest of two impulses to action impels to action. She would no doubt have been accustomed to think of her failing with anger. Hence "the slightest suggestion that women were in any way inferior to men, even in physical strength, would set her in a passion of the wildest anger and let loose a flood of vehement and for the most part unreasonable denials" because she was reminded by such suggestions of her failing. Here, as in the other cases, we have no right to assume that her feminism owes its genesis to her masochism. All that we can see is that by the principle of the conditioned reflex a stimulus to one of the opposing tendencies produces emotions that are due to the other, because the two courses of action have been experienced near together in time. It may be that the two trends have become each more accentuated, but that is doubtful. It is much more reasonable to suppose that as a child she had a strong wish to conform socially, and that this

¹¹Nor that she actually "wishes they might die and so be free"!

wish was engendered by quite other considerations than her masochistic tendency. Soon the two would come into opposition, and the case go on as described.

We have thus seen no reason to set up a new mental process of Compensation. The cases examined have been found to depend on different causes, what appears to be a compensatory activity being only incidental. True it is that opposing tendencies often stand side by side in such a way that one masks the other. But that does not mean that the more obvious one owes its existence in any degree to the less obvious. The term "Compensation" is useful clinically as describing such cases, but it has implications even there, that are dangerous, and its use as describing a new "mechanism" has nothing in its favour. There is no such entity.¹²

PROJECTION

The next mechanism which we shall discuss is that of Projection. This is described by Frink (p. 156 *Op. cit.*) as follows:—"In early infancy the individual has no complete appreciation of where the self ends and the external world begins. The small hand the baby sees before him he does not recognize as a part of his own person. The supply of milk that appears at such times as he is beset with hunger is not at first referred to the agency of another individual." He goes on to show that a similar confusion occurs in later life. Sometimes the individual imputes to himself actions, etc., which belong to others, at other times, conversely, he imputes to others what originates with himself. The first process, viz., that of subjectifying the objective is known as introjection or identification, the second process that of objectifying the subjective, is known as projection.¹³ Thus Hart says,

¹²Note.—There seems some confusion among the writers as to the meaning of "compensation." We have taken Frink's view and illustrations, but there are others which should perhaps be mentioned. Thus Pfister (p. 456 *op. cit.*) speaks of "a substitute manifestation" as compensation. Brill (p. 114) has fundamentally the same view as Frink, Jelliffe, *Op. Cit.* P. 79 identifies compensation with the theory of organ inferiority, q. v. below.¹ Jung² maintains (p. 281) that "the function of the unconscious is to effect a compensation and thus produce a balance." We would point out here that the doctrine of psychic compensation is not necessarily related to that of organ inferiority, although confusion may be caused, as it undoubtedly has been caused, by the use of the term in connection with this latter theory.

¹Psychoanalysis, Its Theory and Practical Application, E. B. Saunders, 1913, Philadelphia.

²Analytical Psychology, C. G. Jung, Moffat Yard & Co., New York, 1916.

¹³See Bernard Hart, p. 118, seq: Pfister, p. 272, Jelliffe, p. 119. Jung, p. 73, Psychology of the Unconscious has a typical definition. The term Introjection was employed first by Ferenczi.

"People who possess some fault or deficiency of which they are ashamed are notoriously intolerant of that same fault or deficiency in others." They "project" their own faults on to others. It is easier for us all to see the beam in our neighbor's eye because of the mote in our own. A good example is given by Frink. A widow went to live in a small town, but soon grew uncomfortable because she said everyone looked on her as a "designing widow." Frink ascertained that she really was looking out for a second husband, and that the thoughts she attributed to her neighbors were really her own thoughts projected. The same thing happens constantly in "delusions of persecution." Introjection is still more common; in its slighter forms it is simply taking credit for what is due to other people. In its larger manifestations it means complete identification with someone else, as happens normally when we "live" through a novel or a play, or when an actor goes through his part, abnormally when a lunatic thinks he is Julius Caesar. The neatest example in the world is perhaps that given by Aesop and quoted by Lord Bacon. "The fly sat on the axis of the chariot and cried, 'Lo! what a dust I am raising.'"¹⁴

Let us examine these two mechanisms. As our baby grows older, he comes to realize that if he performs certain movements certain things will follow. That it is within his power, by actions which he can imitate, to produce an effect in the outside world. If now we suppose a baby with such facilities that whenever he moves his hand in a certain way a green light appears, he will soon, by the law of conditioned reflexes, begin to move his hand expecting the light to appear. If one day, for the first time, the light appears without his moving his hand it would be hard to convince that baby or that child that he had not moved his hand slightly. If my presence is always the signal for a phenomenon of a certain kind, I begin to think that this phenomenon is due to me or my qualities. Examples are everywhere to find. The rich man's son soon becomes convinced of his own superiority. He "introjects" the effect he has to his person, away from his bank where it belongs. When I have accustomed myself to the idea of my individuality as a cause of any phenomenon, then by conditioned reflex when that phenomenon occurs I am apt to regard it as caused by myself, due to my personality. There may of course be, and are often in normal life, inhibitory reflexes which stop this process, but when as often with neu-

¹⁴Note.—Cf. the story of the English colonel with the "drinking complex" who went into the sargent's mess room one evening and found the men all standing on their heads. As none of them betrayed any uneasiness he retired with resolutions not to drink again!

rotics and the insane the general inhibitions are feeble, this pure introjection occurs in its most characteristic form.

But it is not necessary to postulate even this explanation for most of the cases given. They reduce quite simply to examples of the ordinary conditioned reflex. Introjection and Projection are both subject to the same explanation, *mutatis mutandis*. If we take Frink's example (p. 157) of the lady who was sure that everyone thought her a "designing widow," it is clear that she has built up within herself a system round the notion "husband." This system, by conditioned reflex, will involve many stimuli. There will be first the stimulus of the presence of an unmarried, eligible man, which will probably involve the auditory stimulus of the word "bachelor" and of certain eligible professions, such as "doctor," &c. Along with this there will have been occasions when the widow has gossiped—about men. The "husband" system, which is now evidently very active and "raw" (see partial excitation *infra*)¹⁵ is in a particularly favorable state for disturbance. Hence it is but a short step for the gossip and signs of gossip, which before left her unmoved to act as a stimulus to the "husband" system, leading to the accompanying idea that "she is a designing woman and ought to be ashamed of herself," and hence, from recollection of previous gossip in which she herself has taken part or where she has overheard similar remarks being made about others, to the idea that they are saying she is a designing woman. This all takes place by successive conditioned reflexes. If it seem complicated, let it be remembered that in psychology as in most things simplicity is dangerous. It is much easier and more slothful mentally to set up a process of "Projection," as a psychism by means of which subjective happenings are objectified. But "processes" and psychisms do not spring fully armored out of the womb of the unconscious. They are built up step by step, little by little, and step by step they may be resolved back into their component elements.

Let us take another example; if I shut my eyes and press on the surface of the eyelid, I have a "sensation of light." Here my eye attributes to the external world a phenomenon which is due altogether to my subjective self. Disturbances of the retina are in an inconceivably large proportion of cases due to the incidence of light. Hence by the law of conditioned reflexes, these disturbances are so interpreted when they are produced quite differently. The same explanation may

¹⁵G. Humphrey, L. C.

be given of many other hallucinations; changes are somehow subjectively produced in the central nervous system which are generally due to objective phenomena. The organism, then, by the law of conditioned reflexes, refers the disturbance in every case to such external phenomena.¹⁵

One more instance: Frink cites the case of a young woman who over passionately defended Mrs. Thaw. It turned out that her own case had been similar. Here there is a violently strong system in the young woman which is touched right off by the appropriate stimulus. Mrs. Thaw was simply connected with certain experiences which had been her own experiences. There is here no introjection, only a reaction by appropriate stimulus to a system acquired in the girl's own experience.

The instances then that are given for Introjection and Projection do not make it necessary to postulate new psychical processes. There are undoubtedly cases, pathological and otherwise, where the organism attributes to itself results produced by other organisms, or vice versa, but these pure cases are comparatively rare and can in every instance be explained by the principle of the conditioned reflex. The majority of the instances given are by no means so unusual, but can be shown to be ordinary cases of response to stimuli in accordance with the principle of the conditioned reflex. There is no special mechanism of Introjection or Projection. The phenomena are due simply to a system of conditioned reflexes, sometimes of unusual type.

RATIONALIZATION

One of the most interesting of the processes which are claimed as separate mental entities is that of Rationalization. This is the mechanism of giving reasons—"the practically universal tendency to justify our actions or our thoughts on verbal principles."¹⁶ Lay gives the example of the man who cut down his cigars because of his health. Then when he wanted a cigar he would "reason"—I only had a cheap cigar yesterday. I will get a good one today to make up for it," or "his daughter would suggest a cigar, and he would take that as an excuse." Or, when he had indigestion, he would decide that his ill health had nothing to do with his smoking, and there and then buy a

¹⁵e. g. the singing in the ear produced by quinine. It is hard to persuade a child that this is not due to a "noise."

¹⁶Lay, *Child's Unconscious Mind*. p. 166.

cigar. This is a case of Rationalization where a desire is concerned. Similar cases are apt to occur very often in everyday life. The man of a more than usually optimistic turn of mind can always find reasons why everything has turned out for the best; the pessimist will see only evil in the same occurrences. According as I belong to one or other of the great American parties, President Wilson is the one strong man in the country, whose will can surmount the burden of sickness and pain, or he is an obstinate man who has in his jealousy of subordinates taken too much on his own shoulders. We have an incurable tendency to explanation. If the real explanation so far as we know it is distasteful to us, we search round until we find one which pleases us. A girl who is entering a hospital as a pupil nurse decides that Providence is best because it is cheapest. Then she discovers that New York is really better, because it is a larger city. The link is that a certain minister is leaving Providence for New York. She herself, even, half believes the explanations.

One of Frink's cases is interesting. A certain woman insisted on wearing nothing but black. The reason she gave and believed was that it was more durable.¹⁷ Frink suspected this, because her husband was well off and it was summer, when black clothes are uncomfortable. In the course of analysis it came out that she harboured resentment against her husband, and the dressing in black was symbolical of her penitential feeling because of that resentment. Frink says it was also symbolic of her husband's death: we need not go with him this far, but the important thing is that the wearing of black had for the woman a significance which was different from the reason she gave (See Frink, *op. cit.* p. 132). The human being must explain, must find a context.

Another explanation is possible besides that of a special psychic faculty. When I act in any way, see anything, feel anything, I have in the past had experiences concomitant with similar actions. Thus in the case of the man and the cigars, indigestion has in the past caused headaches. His daughter has previously handed him a cigar and he has accepted it, not wishing, perhaps, to hurt the child's feelings by refusal. Hence out of all the psychic ramifications of the cigar-object, there will be one which will fit the case as a "reason." Why does he not give the "true reason?" Because, he has established an inhibition. The act of resolution not to smoke marks, in effect, the forma-

¹⁷It is doubtful whether this is even true.

tion of an inhibition against smoking. The original smoking habit has meant that certain stimuli produce the response of taking or buying a cigar. That is, a system has been built up by means of conditioned reflexes, by which the response "buying a cigar" is connected up with the incidence of the specific stimuli. The resolution not to smoke marks a breaking of this connection—"when I want a smoke I will not buy a cigar." Wanting a smoke and buying a cigar now have the reverse of a connection with that man; they have, to speak metaphorically, a mutual avoidance-relation. Whatever the man thinks of in connection with the buying of a cigar it will not be the smoking stimuli—the "real reason." Hence the thought of a cigar brings up any of the other connections established by conditioned reflex in the man's mind with the thought of cigar. He says he bought a cigar "because his daughter asked him," "because he had not had one for a week"—anything but "because he wanted a cigar." It is as though the man were on an island, representing the purchase of a cigar, which is connected by bridges with other islands, representing concomitants of the purchase. The main bridge by which he has actually come, leading to the explanation "I wanted a cigar", he has blocked, so he takes another, to the explanation "I had indigestion", along the path of less resistance. The whole process is, of course, infinitely more dynamic than this illustration implies. The mental processes are in a constant and momentary state of flux, first one, then another more distant connection being made, the "train" beginning at a specific stimulus and ending—anywhere. But the one great principle runs through the whole process—the law of the conditioned reflex, of the substitution of the simultaneous.

It appears from this example that when we look for an explanation we are in reality searching for secondary stimuli. To the dog in the laboratory who is fed when a green light appears, the light soon becomes the "cause" of the food to the animal. If it could be interrogated it would answer that a green light always "meant" food to it, and that this was as far as it could go.¹⁸ It looks for the invariable concomitant of the phenomenon of feeding, which is in this case a green light, the secondary stimulus. In just the same way the savage searched for the invariable concomitant of the phenomena he observes. If it is a moving stream there is a god in the water pushing it down to the sea. He has observed motion in trees pulled along by

¹⁸The pragmatist position!

men or animals, in boats propelled by men, in wagons pulled by men or beasts. The visual stimulus of a man or an animal has been experienced many times simultaneously with a moving object. Hence this particular moving object, the primary stimulus, is "explained" by the "secondary" stimulus, man or beast in the river pushing it along.¹⁹ Now after a time this explanation was seen not to apply. Experience was widened and stored, and it was seen that the man or beast theory (the personification theory of anthropology) did not always work. The reflex began to be inhibited and discriminated, until with the later Greeks the river was said to be pushed along by a *vis viva*—living force.²⁰ That is, we have gone still further in our backward search for simultaneous stimuli; we say that it is "living force," not necessarily a living man or a living animal, that pushes the river along. Today we say it is the force of gravitation, and Newton and later Einstein have demonstrated certain other concomitants of motion under gravitation. From the Nile God to Einstein we have the same process, the search back for concomitants, and the gradual discrimination of the secondary stimuli involved when we see an object fall. Our great advantages over the animals are that we can profit by the experience of our most gifted fellows, that we can place such experience on record, and that we can make very much finer and more complex discrimination.

It is probable, then, that the Freudians have made at once too much and too little of the process of rationalization. Too much, if they put it down as an ultimate unanalysable process; too little by not recognizing that it is but a special case of an activity enormously important in the cultural history of man, namely the search for secondary stimuli. "Rationalization" does not necessarily involve an unconscious factor. Sometimes it does and sometimes it does not. It is simply the process of searching for secondary stimuli. Sometimes the secondary stimulus that would normally come up in this search is shut out by an inhibition "within the organism"; this is the particular case that the Freudians have taken. Sometimes the recall of the first secondary stimulus—concomitant phenomenon—is inhibited by further external phenomena, as we saw to have happened in the case of the law of gravitation. In neither case, again, need we postulate a new psychic entity.

¹⁹See Plato's *Cimnias*.

²⁰Some confusion may be caused by the fact that the "secondary" stimuli psychologically are "prior" logically. This has been pointed out by Aristotle, who says that some causes are nearer to the individual but prior in the science. Cf. *An. Post. Cap. XVIII*.

TRANSFERENCE

This is defined by Frink as the case where "instead of identifying external objects or persons with himself, the individual identifies them with each other and behaves or feels towards one in a way that is appropriate and conditioned by experiences and impressions which really refer to the other. The subject is not usually conscious of the existence of the identification nor as a rule does he remember at all completely the experiences from which the transferred feelings really arise."²¹ Thus it will often happen that one is attracted towards a person at first sight because he "reminds him" of a friend. Such a substitute friend will be treated often with affection until perhaps there comes a disillusionment so gross that the one deceived will say "I cannot imagine how he ever reminded me of so and so." The magazine tale of the poor boy who was adopted by the rich business man and ultimately made his partner, all because the boy reminded him of his lost son, in perhaps the way he ruffles his hair or some other slight mannerism, undoubtedly represents what has actually happened in many cases. We do transfer whole systems of reactions from person to person on very slight grounds. It is interesting to notice that Frink (p. 196) gives the conditioned reflex as the explanation of this phenomenon. "That such insignificant stimuli," he says, "should have at times the power to produce such profound and apparently disproportionate reactions seems at first thought hardly credible or at least without parallel with anything else within the sphere of our observation. Nevertheless there is a parallel to be found" and he goes on to cite the work of Pavlov and others on the conditioned reflex. As Frink points out, the difficulty is that a detail shall produce the whole reaction, but he seems to think that the ordinary conditioned reflex accounts for this. (p. 197). This is not the case. As we have seen a system or reflexes involves a complexus of stimuli, and often if an insignificant stimulus be left out the whole system is rendered inoperative. On the other hand, it does sometimes happen that an insignificant stimulus will of itself produce the whole reaction. The conditions and the explanation of this phenomenon are obscure, but the fact is unmistakable. This is what happens in the case of "transference": I may be induced by a comparatively insignificant detail in a stranger's appearance to react towards him as to a friend with the

²¹*Op. Cit.* pp 192, 3.

same peculiarity. But, such cases are comparatively rare, and the examples given are usually explicable on different grounds.

Two special cases deserve mention. The first is the case of transference upon the psychoanalyst. Jelliffe uses the term almost entirely in that sense, maintaining, as does a psychoanalyst personally known to the writer, that a cure is impossible until this transfer takes place, i. e. until the patient regards the physician as he once regarded some other person, relations with whom have caused the trouble. This in the case of women patients is often a lover, and so it seems almost a necessity for the woman patient to fall in love with the analyst. The fact that women patients almost invariably do so fall in love is then given as corroborative evidence of the doctrine of Transference. It is not recognized that the past history of these patients shows an unstable tendency in this respect, and that the stimulus is the presence of a member of the opposite sex. The woman is attracted by the same thing in the doctor as in her previous lovers and there is no need to assume transference in any shape. The remarkable thing about the phenomenon of falling in love seems to be not that persons change but that they are relatively so stable.

The second point is put thus by Frink: "The most important of these patterns are formed in childhood, usually before the end of the sixth year and . . . the first source of the affects transferred is to be found in the relations of the child to his parents and to the other persons constituting his earliest environment." We hope to discuss this question later in its educational implications, but it may be mentioned that to assume that because a physician adopts a "paternal" air towards a patient, and the patient a correspondingly filial air of obedience to the physician, therefore and from similar considerations the physician is always one of the "revenants" (Freud) in whom the neurotic patient hopes to find again the vanished figures of childhood²²—this seems a large inference from very slight premises. It is easy to see how an *analysis* can bring out the physician in the light of a parent "revenant": The child acquires, from his parents, schoolmates and others, the knowledge that certain gestures and tones of voice means anger, and that when these gestures, etc., are observable in others more powerful than himself it is best for him to adopt corresponding attitudes of submission, in other words not to be impertinent. This reaction becomes, of course, perfectly automatic, being a condi-

²²Ferenczi, Contributions to Psychoanalysis, Boston. Richard L. Badger, 1916, p. 35.

tioned reflex or a system of such. If now he observe these gestures in others, not those from whom he originally "learnt" their meaning, he naturally reacts to them. Now suppose later he has occasion to be treated by a psychoanalyst, who uses the "paternal" or the "intimidating" air to him, and then enquires from him what mental associations the patient has formed with the physician, naturally the answer is that the patient is reminded of the parent. It does not always follow that one stimulus will bring back the whole of the system to which it originally belonged. One swallow does not always make a summer, though sometimes it does undoubtedly do so. As an instance of the length to which the child-in-the-adult hypothesis will lead, may be cited Ferenezi's theory of hypnotism, which postulates two kinds of hypnosis, a maternal and paternal, depending on love and fright respectively.²³

SYMBOLIZATION

This mechanism is, according to Freud, at the bottom of most of our dreams and much of our waking life. Brill²⁴ quotes the following definition of a symbol, viz., "a false perception of a marked relation of identity or analogy between two objects which, in reality, present only a vague analogy." It is pointed out that symbols "represent a lower form of thinking, for they identify objects which have only a very remote analogy." Children and savages symbolize largely. Thus a child will let a stick stand for a gun, a cushion for a pig and books round the cushion for the sty. One primitive nation, "pour water into little holes in the floor of the pagoda as a symbol of the rain which they hope Buddha will send down on the rice fields in good time."²⁵ The twelve volumes of the *Golden Bough* contain a mass of details of primitive symbolism. The way in which the term is used in the Freudian psychology may be seen from the following examples." In dreams, a room may signify either a woman or a womb . . . the idea of father or mother is constantly symbolized in dreams by that of king or queen respectively"; "the number of symbols met with in practice is extraordinarily high, and can certainly be counted by thousands."²⁶ "Thinking goes on by symbolism in order to learn to deal

²³Opus Cit, p. 60. Cf. also Bjerre, who makes hypnosis a return to the foetal state!

²⁴Psychoanalysis, Phila. & London, W. B. Sanders Co. 1913, p. 65.

²⁵T. G. Fraser, *The Golden Bough*, Macmillan 1911, Vol. I, p. 251.

²⁶Psychoanalysis. Ernest Jones, New York, Wm. Wood & Co. 1919. See the astonishingly erudite note on p. 144.

with reality in the easiest and most sparing way." (P. 153). The whole literature is full of references.²⁷

After our previous discussions the explanation of symbolism will be almost obvious. If we define a symbol behavioristically as that which serves as the stimulus for a reaction originally produced by another stimulus, then it is clear that by symbolization is really meant the process of forming a conditioned reflex or a chain of conditioned reflexes. I experience a certain reaction when I am with my father, due to his position at the head of a family. Mention of the word "king" brings up the same feeling, the element of authority being common in both cases. Now supposing that my father has temporarily annoyed me. The respect I have for him forbids me to think of any reprisals. Directly antagonistic thought against him is inhibited, that is to say, there is inhibition of any antagonistic thought containing the conception "father." The "hostility" feeling is there, but is cut off from connection with "father." Meanwhile the thought of father has brought up the thought of "king," to which hostility feeling attaches itself without inhibition, and I dream I am assassinating a king.²⁸ That such symbolistic action occurs is indubitable. I observed in Hanover the page of a school history book defaced, and looking at it found that it gave an account of Bismark's career. This action would have been recognized as symbolistic by the authorities and the child punished. The students of a Canadian university burn in effigy the figure of an unpopular but strong professor. They dared not make a commotion in his classes, the inhibitions were too strong, and perhaps there also took part a sense of what was due to the university. There were no inhibitions against burning figures. Like all the other processes we have examined symbolization is nothing but a particular example of the formation and inhibition of conditioned reflexes. As a clinical convenience the term may be useful, but the use of the term as implying a psychological entity has no justification.

We have now dealt with the chief of the Freudian mechanisms, and found that while we would not wish to deny many of the facts, yet we could not acquiesce in the Freudian postulate of particular psychic mechanisms to explain the facts. Everything is perfectly explicable by the simple principle of the conditioned reflex together

²⁷See White, *Mechanisms of Character Formation*, Macmillan 1916, Ch. V. for a good account.

²⁸See Freud for many such examples. The mechanism is parallel to that of rationalization.

with the sub-principle of conditioned inhibition and all that this implies. With the Censor we have not dealt specifically, as it will be clear from the foregoing discussions that this is simply another name for the general mass of inhibitions—negative purposes—which we acquire as we go through life and which govern our daily conduct.²⁹ Before we go on to an examination of the more technically educational implications of our criticism, there are still a few general tenets of the new school which must first be examined.

THE APOTHEOSIS OF THE UNCONSCIOUS

That part of the Freudian hypotheosis which deals with the unconscious has attracted most attention of all from the semi-psychological public. The claims made for the unconscious have been so startling that the interest was justified. Further, as it is the essence of the unconscious to be outside of consciousness any personal qualms caused by the somewhat unexpected disclosures of unconscious life within us were silenced. For ex hypothesi I have no knowledge of all this that is happening in me, and further I cannot be blamed for what I know nothing of. We quote a few examples of the sort of thing that is being maintained of the unknown life within us.

"The index of Frink has "The unconscious is primitive, Unconscious has no regard for reality, Unconscious is infantile . . . Unconscious contains no inhibition, no negation, no conflicts."³⁰ Further Lay tells us (p. 45 Op: cit) that the unconscious is "ever retentive." One of its attributes is an absolutely unfailing memory. In passing it need hardly be pointed out to anyone not of the Freudian persuasion that this statement contains a false generalization. Never is a hard word, and although memory often plays strange tricks where unexpected things are remembered, that does not prove that thing is remembered. On the contrary, the experiments of Pavlov prove that reflexes may become inoperative in two ways: either they may die out, or they may be inhibited. It seems very much as if the Freudians, having discovered that some reflexes are brought to light by removing the inhibitions, have thereupon concluded that in a corresponding way all experiences could be brought to light by taking away the proper

²⁹For a second Censor, which certain doctrines of the Freudian unconscious make necessary, see Frink, p. 82.

³⁰Evidently doctors disagree. Cf. the title of Lay's book "Man's Unconscious Conflict."

inhibitions. Discovering that some things thought forgotten are really not forgotten, they conclude that nothing is forgotten.

Resuming then, "the unconscious is the primitive both phylogenetically and ontogenetically."³¹ It represents our infantile and primitive moorings. We, so to speak, drag it behind us like a huge and heavy tail which is always weighing us down and making ascent difficult.³² This would seem perilously near a misstatement of the discredited recapitulation theory, especially when we read elsewhere that the unconscious contains the history of the race. But we let that pass. "It *thinks*, in its elemental way, and in archaic modes . . . it gets great satisfaction from a feeling of superiority, of greater strength or power when comparing itself with the other individuals. It constantly resorts to any means whatever by which it may gain a feeling of superiority, and in this the methods are bizarre and grotesque, not to say weird."³³ It "has an extremely subtle skill in shaping humans according to its desires."³⁴ A mother is wondering whether her little boy shall go fishing. "What is mother's first idea?" "Oh, I'm afraid that he might get drowned." What put that idea into her head? The Unconscious. What would it lose if Willie got drowned? Nothing. It would go on wishing for more excitement. It would reap the intense feelings of a nine days' talk. It sent up that idea into mother's head *from the depths where it has been squirming for aeons*.³⁵ The Unconscious is also responsible for all manifestations of Wit, Imagination and Genius. There is no wonder that "we experience a feeling of awe and a sensation of being confronted with something of enormoussness and immeasurable import when through the study of the newer psychology we face the infinite deeps of the human soul." Is it not time to cry halt? Mental activities we admit, conscious and unconscious, but not this wise and bestial Caliban within us. At best, the Unconscious as here conceived is but a hypothesis:³⁶ it is nothing more than a deduction from the facts. "We must assume the agency of unseen psychic forces if we are to regard the phenomena of mental life as having any law and order."³⁷ It is the great Freudian Hypothesis of Hypotheses, typical in its picturesqueness and as-

³¹Frink p. 62.

³²White, Mechanisms of Character Formation, p. 98. Compare p. 63 top.

³³Lay, "Man's Unconscious Conflict, Ch. V.

³⁴Pfister, p. 98.

³⁵Lay, Ch. vi.

³⁶Compare the "proofs" of the existence of the Unconscious, Pfister Op. Cit. Ch.

³⁷Frink, p. 33. See also Ernest Jones, O. C. pp. 122, 3.

sumption of existence as a separate entity. And it is more than probable that everything which it explains can be explained more simply by the conceptions of the conditioned reflex and the conditioned inhibition. It is time for a revision of the Freudian conception of the Unconscious. It is not possible here to make the exhaustive investigation required, but it may be stated that every one of the instances that we have seen is capable of explanation on the simpler hypothesis of ordinary inhibition and inhibited inhibition. In any case the Freudians are entirely unjustified in speaking of "the Unconscious" as though it were a unit. Unconscious wishes there may be; but of the synthesis of these wishes into a system in normal cases there is no evidence. Some of the attributes of "the unconscious" we have already rejected. Against its ubiquitous dragging as a psychological *deus ex machina* we have from time to time protested. Its existence is, according to its own advocates a hypothesis only. This hypothesis, it has just been maintained may be replaced by the simpler one of the conditioned reflex combined with conditioned and inhibited inhibition. Further, even if we are not justified in supposing that we can explain all the facts by the above means, we are yet unable to accept the Unconscious as a unit in normal cases but must substitute the *disiecta membra* of a number of unconscious trends. The whole question needs careful examination, which would undoubtedly result in the demolition of a large part of the fantastic superstructure which the Freudians have built over the undoubted facts.

CONFLICTS

Another conception which is fundamental to the Freudian system is what is known as Conflict. The general notion of conflict is well described by Bernard Hart.³⁸ "Suppose that a complex is for some reason out of harmony with the mind as a whole, perhaps because of its intrinsically painful nature, perhaps because it prompts to actions which are incompatible with the individual's general views and principles. In such a case a state of "conflict" arises, a struggle, as it were, between the complex and the personality." He takes the case of a man enamoured of a woman, who is already the wife of another man. "The lover's mind will then exhibit two complexes trending in opposite and incompatible directions, on the one hand the desire for the woman, on the other the opposing tendencies constituted by moral

³⁸Psychology of Insanity, p. 78.

education and fear of consequences." . . . "The individual feels himself torn between two lines of conduct, neither of which is possible on account of the resistance offered by the other." This account is admirably clear cut and positive. The Freudians, as usual, limit the use of the term to cases where one element at least is unconscious. "A conflict arises in the psyche between the cravings of the "Unconscious" and the restrictions put upon those cravings by the conventions of society."³⁹ It is clear that there is no reason why this limitation should be made. It seems to be only another instance of the Freudian passion for dragging in the Unconscious. In our investigation we shall examine the conception as a whole, and all that we say will apply with equal force to the Freudian as to any other type of conflict.

It is difficult to discover exactly the nature of the psychic situation said to be involved. "The fundamental nature of psychomachy has not been made clear."⁴⁰ Of the fact that there are two opposing trends there seems no doubt. Thus Healy: "A mental conflict . . . occurs when two elements, or systems of elements, are out of harmony with one another."⁴¹ There seems also agreement that stress is caused by such a mental discord. Thus Bernard Hart⁴² "Conflict with its emotional tension and accompanying indecision and paralysis of action cannot go on indefinitely." But as to the nature of this stress, in what it is caused, why it is caused, there seems an almost universal silence, which is the more remarkable considering the extreme importance of the conception for the new Psychology. White has a chapter⁴³ which seems interesting as metaphysics but, to say the least, of vague psychological import. Healy announces that "The term *mental conflict* represents an idea which it is not difficult to understand." Brill,⁴⁴ speaking of hysteria as the "result of a conflict between the libido and the sexual repression" says "it is the mental conflict which is the essential causative factor and not the sexual moment as such." But for explanation we look in vain. It is assumed that the term carries its own explanation. In fact, it seems, that the facts have been observed and then *explained by a metaphor*. It is undeniable that certain incidents occur, certain stimuli arise, which "touch off" diverse lines

³⁹Lay, *Man's Unconscious Conflict*, p. 220.

⁴⁰E. Southard, *Psychological Bulletin*, 1917, p. 201.

⁴¹*Mental Conflicts and Misconduct*. W. Healy, Little Brown & Co., Boston, 1917.

⁴²L. C. p. 79.

⁴³P. 62. *Op cit*.

⁴⁴*Psychoanalysis*, p. 25.

of conduct. The organism is then conceived as being torn in two by the opposing tendencies, and suffering therefrom of "emotional tension, indecision and paralysis of action." Just as a string which is pulled at both ends suffers from internal tension, so does the organism suffer from stress, being pulled in two directions by opposing trends.⁴⁵ Now if this metaphor of tension is to hold good, there must be something which is being pulled in different directions by two forces from outside. If it is said that the tension comes in the muscles which are being given antagonistic nerve impulses, the answer is that such antagonistic impulses, do not produce tension in the muscles but simply cancel out by mutual inhibition. Further, Sherrington explicitly states that "there is no evidence that inhibition of a tissue is ever accompanied by the slightest damage to the tissue; on the contrary it seems to predispose the tissue to a greater functional activity thereafter."⁴⁶ Hence, neither is the muscular system the theatre of war, nor can the undoubted physical harm done by "conflicts" be due to inhibition of the muscles. A similar line of reasoning will apply to every other part of the body which is controlled by the nervous system. Further, the "all or none" law precludes any possibility of the "tension" being due to conflicting impulses in the same nerve fibres.

It seems then that the seat of the "conflict" is nowhere in the human frame, nor can it be the frame as a whole for that would involve some one or other of the parts we have excluded. This makes us inclined to doubt the theory of conflict as thus stated. The essence of the theory is that damage is done to the organism as the bone of contention, as that for which two opposing forces are fighting. We have been able to find no part of the organism which is suffering in this way.

Further, if it is the pure conflict that causes the trouble, we would expect to find but one generic kind of trouble. It makes no difference to tension of the cord whether we hang at its two ends a hundred weight of flour and of turkeys, ten pounds of sugar or of shot. The tension in the two cases is identical. Similarly, if there were some part of the human body (or the human body as a whole) that was being pulled in two different directions by two different trends, the conflict qua conflict should be identical in each case. This is not found to be so. There are many different types of conflict, issuing in as many

⁴⁵Cf. Such words as "distracted."

⁴⁶C. S. Sherrington, *The Integrative Action of the Nervous System*. New York, 1906, C. Scribner's Sons, p. 96.

different types of behaviour, and depending upon the nature of the opposing forces." It may be said, to borrow Bernard Hart's phrase, that they are all marked by "emotional tension and accompanying indecision and paralysis of action." But the indecision of a man hesitating whether or not to elope with his neighbour's wife is very different from that of a boy wondering whether or not to take a newspaper. The emotions in the two cases are about as far apart as they could be. Psychologically speaking, the indecision is different. This difference seems to show that the "tension" theory is not valid. It seems that the "opposing" trends enter into the very nature of the "conflict" colouring it with the emotions that belong to both of the contending parties. There is not one kind of "Conflict" but many conflicts, each of which is as different from the others as are the divergent elements which compose it.

The state known as "Conflict" has then no ascertainable basis which can be designated as the seat of the "tension." It is, further, no isolated, special state of the organism, but varies with the component elements that give rise to it. Moreover, the same state can be produced without the two opposing trends which are essential to the "pulling in different directions" theory.

We have referred to the Organ Inferiority idea of Alfred Adler. This is beginning to take an accepted place in the Freudian psychology. But its import has not, I think, been generally recognized. Briefly the theory is as follows:—a weakness in any organ or any part of the body will produce a profound change in the attitude of the organism to the outside world. If there is to be adaptation, the deficiency must somehow be made up. The efforts of the organism to make up for the inferiority in some detail may require such expenditure of energy that the nervous system cannot stand the strain and a neurosis is found. Examples of the effect of such "organ-inferiority" are not hard to find. It happened that the writer discovered that he had a slight heart murmur in his third year at College. Whereas before, he had taken a fairly pronounced interest in athletics, running or heavy exercise of any kind was now forbidden. The result was a veritable torture—especially in those places where others were exercising. The feeling of inferiority was most pronounced and as painful as anything might well be. It was perhaps a year before it began to wear off. Take the case, again, of the youthful Demosthenes, and his shame at being hissed from the assembly. Here there was what Adler calls

compensation⁴⁷ for the weakness. Demosthenes' every thought was henceforward bent towards making himself not only equal but even superior to others in his weakness. That is the general theory of Adler, who shows that in very many cases neuroses are produced which are exactly similar to the Freudian neuroses, produced, some of them, without a doubt by the joint action of two impulses. The importance of Adler's work from our point of view is that all the essentials of conflict are thus shown to arise when there is only one psychical element concerned. If I am tied to a post in front of food and drink which I cannot reach, very soon I reach a stage indistinguishable from that of a severe neurosis, especially if I am kept alive by judicious doles of water. Later I "go mad," as it is called. If now instead of being actually kept away from the food by grossly physical means there are other reasons why I cannot get enough to eat if e. g. I am slowly starved by physical incapacity to earn a living it is probable that a similar state of affairs will arise.⁴⁸ Charcot at La Salpêtrière found an extraordinary number of "neurotic" cases. The actions of men who take part in revolutions are undoubtedly due in large measure to disturbances of this type. If now it is not a case of obtaining food but of an almost equally potent urge, the attraction of the other sex, and I am unable to obtain this aim by reason of some physical defect, then as Adler has shown in abundance, there is a considerable probability that I will develop a more or less serious neurosis. Such people are "queer"; dwarfs are notoriously "peculiar"; the blind are said to be "not normal," as a class. The examination of Adler's book will convince that actual neuroses of such origin are far more common than would be supposed. And they originate in the first instance from a physical deficiency. Later, of course, complications of a psychic nature may set in, but Adler seems right in maintaining that it is the physical inferiority that is at the bottom of the trouble.

Here, then, we have the exact setting and concomitants of a "conflict" with only one internal psychic element involved. This element is an ordinary "system" directed in the case of the tied up man and the beggar to the getting of food, and in the case of the dwarf to the satisfaction of the sex urge. If now we make the hindrance to the getting of the purpose internal or psychic instead of external or physical we have the conventional case of conflict. Suppose, e. g. that I am

⁴⁷Not to be confused with the Compensation treated before, where both sides of the relation are purely psychic and where no inferiority-motive enters.

⁴⁸See the Chapter in Carlyle's *Heroes and Hero Worship*.

starving and pass some food, but refuse to take it because I will not steal. Here is a conventional conflict. Suppose, again, I fall in love with my neighbour's wife. Here is another "conflict." The only difference in the two cases is that here the hindrance is "internal" in the way of an inhibition, there it is "external" and takes the form of physical compulsion. The actual results, physiological and psychological, are the same in both cases.

Now the essential thing in the current theory of conflict is that the neurosis is produced by the interaction of two trends. We have shown that one trend can produce exactly the same result. The only possible conclusion is that it is not the interaction of the two trends that makes the trouble but one or other of the trends in itself. That is, that the "stress," to adopt the metaphor, is not external to the two trends but internal to one or both of them. Now if we examine cases of "conflict" or of the other stresses which we have taken as producing the same result as conflict, we find that there is one characteristic which they all have in common. All of them depend on one or two systems of conditioned reflexes which require, as we have seen before, each of them a nexus of stimuli, simultaneous successive or overlapping, to set them off. And, in every case we have taken, some of these stimuli are lacking. For example, on page 65 we have taken the case of a man tied up in front of food and drink. Here the visual stimulus of food is present and likewise the internal stimuli which impel to obtain food, but the food is not present either in the mouth or the stomach. The suffering of such a man will be every whit as great, to say the least, as that of any patient afflicted with the most violent "conflict." If he dies it will be found that the same degenerative changes have taken place in his organs as take place when there have been purely "psychic conflicts." The state in which he is differs in no respect as far as we can see from the state of "conflict" where two psychic trends are involved. And it is accompanied by partial excitation of a powerful system. Taking the other cases we find exactly the same to be true. The hungry man out of work continually sees food which he needs but cannot take. Here there is the partially excited hunger system, the hindrance in this case, however, being less grossly physical than before. The man knows that physical force will be used against him if he persists in taking food from the baker's. Once or twice he may escape, but in the long run he will be caught. In the case, now, where a man is temporarily very hungry but will not take food because of conscience we have the same phenomenon with a purely internal in-

hibition: here is partial excitation with a case of "conflict" involving the usual opposing trends. Similarly in the cases of the physically deformed man and the sexual motive. Again a powerful system is continually being partially excited, the hindrance being physical. When we take the case of the man who is struggling to resist the temptation to elope with his neighbour's wife, we find precisely the same situation with a psychical or internal inhibition—an ordinary case of "conflict" with two opposing trends. The conclusion from these examples is inevitable. The state of mind known as conflict does not depend upon the opposition of two trends; it is conditioned not by an internal struggle but by the partial excitation of one or more systems of reflexes. In the case of "psychic" hindrances to complete excitation there are two systems involved, neither of which is completely "touched off," and hence the "struggle" would be expected to be coloured with, the emotions of both systems. This we saw was the case in our criticism of the "battle" theory. The tension is not *between* two trends but rather the *mutual internal product* of the two trends, internal, as we have said, to each of them, not external to both. The physical damage is not produced by inhibition or by physical tension of any part of the organism but is somehow connected with the emotion which comes from the blocking of an action already initiated. Just as there is no difference between the physiological effects of emotion and exertion, so there seems to be no psychological difference between external restraint and internal inhibition.

The view we have taken of conflict seems to fit in particularly well with the facts in other directions. It is hard to conceive of a neurosis arising from a complex or system which is receiving adequate stimulation. True it is that systems sometimes grow up in such a way that adequate, full stimulation is impossible. An inhibition may be grafted parasitically on the main structure in such a manner that the system cannot react as a whole. Here it would appear that we have full stimulation without adequate response. But as a matter of fact such a system taken as a whole can never be adequately excited. The compound stimulus which it requires is an impossible one, for it is a compound stimulus one element of which must satisfy the two opposite conditions of action and restraint from action. Such is the situation when a man would have his cake and eat it too, which, as the proverb declares, is impossible. In these cases the only thing to do is to break up the system by inhibiting the inhibition or in some other way. These cases soon become indistinguishable from "conflict"

where there are two opposing trends, and it is doubtful whether they often occur, i. e., whether in such a case we should regard the inhibition as not really forming part of the system but as constituting an opposing system.⁴⁹

It is to be noted that we do not lay down that partial excitation as such causes "conflicts." We only maintain that when there is "conflict" there is invariably partial excitation. Still less do we say that partial excitation causes all neurosis. Whether or not, given partial excitation, a neurosis will develop depends on several factors which we know and probably on several more yet unknown. Some organisms can "stand" more than others, and a situation which would drive one man to the verge of insanity is the spice of life to another. A year on the stock exchange would do permanent harm to many a perfectly normal man who leads a quiet life. Some of us would never have the "nerve" to become army aviators, however carefully we were trained. Whether or not a neurosis will be formed in any given situation depends on the relative strength of the organism and of the system or systems involved, and the extent to which they are involved. Further, not all cases where part of a compound stimulus is lacking produce what we have designated as partial excitation. We have noticed in our discussion of the Freudian transference that it sometimes happens that one detail will play the part of a psychological Atlas, bearing upon its shoulders the full reaction for the whole system. This, it should be noticed, often leads to pathological results, as in the case mentioned by Burnham where a little girl passed a dog kennel and the dog, though chained, jumped out at her, with the consequence that she received a severe fright. After that she could not pass the place without an agony of terror, and the process of extending the reflex was carried so far that just teasing the child, then the sight of the persons teasing, then stimuli so small that they could not be distinguished, brought on the paroxysm. Here the normal reaction would have been a partial excitation of the system "kennel-dog-place" when

⁴⁹In view of such cases where we seem to have to have all the stimuli necessary for full excitation but the full response does not occur it has been suggested by Dr. Dearborn that partial response would be a less misleading term. This seems to meet the one objection, but on the other hand it seems to divert attention from the fact that the cases usually depend upon a definite gap in the stimuli. Further, there cannot be partial response without partial stimulation and vice versa, and as we have pointed out, part of the compound stimulus of a system consists of the reactions of component reflexes. When, owing to an inhibition, a reaction which thus is a stimulus is not present, it is clear that we still have only "partial excitation," and thus our term is justified. What is really wanted is a term implying stimulus and response. Perhaps "partial reaction" would be preferable.

e. g. the dog was not there, instead of this complete reproduction at the sight of the kennel and later at the mere thought of it. Such a partial excitation (granting that the shock was at first strong enough to weld the system together) would have caused at first a slight uneasiness but would, in a normal individual, have been rapidly dissipated and inhibited, the system being broken up and so to speak reabsorbed into the psychic fabric.

Partial excitation takes place very often in normal life. It is only when the strength of the systems involved and the extent to which they are involved (which means the strength of the stimuli, internal and external)⁵⁰ are too great relatively to the robustness of the organism that a neurosis is produced. Exactly how this type of neurosis is produced we do not know; but there is no doubt as to its intimate connection with a partially excited system of reflexes. The space which has been given to this analysis may seem disproportionate; but the conception of conflict is a good example of the looseness of thinking which characterises much of the newer theory. The whole Freudian position depends upon this notion of conflicting trends and the damage they do, and yet we find a prominent authority maintaining that the fundamental nature of the process is not clear. A convenient metaphor was found and the subject dismissed. Meanwhile the notion is gaining ground in educational psychology, and it is safe to predict a crop of books within the next five years describing the conflicts of children and the good results to be obtained for teachers by learning to understand them. Already indeed there are books dealing with children's "mental conflicts" from the point of view of delinquency, and we shall conclude this account with an analysis of a case described by Healy (No. 10, p. 156)⁵¹ of which he says "no case illustrates more clearly the relationship between mental conflict as cause, and delinquency, as result than the following instance of a young boy whose night wandering caused his family much anxiety."

CASE OF JOHN B.

It was a policeman who first brought John B. before the notice of the authorities. The officer had heard of him from a street car conductor who knew of his habit of night riding, and an investigation

⁵⁰And by the all or none law, this means the number of nerve fibres involved, unless we adopt A. Forbes' theory.

⁵¹Mental Conflicts and Misconduct, Boston, Little Brown & Co. 1917.

of the home disclosed that this had been going on for some time. The boy was 11 1-2, delicate in appearance, backward one year by the Binet test, which the examiners felt, however, did not do him justice owing to his nervous condition. There was a history of physical delicacy but no hereditary nervous trouble. "Two years before he had been truant for a short time" and had been sent to a private school for a year in consequence. "After his first adventure they watched him closely and did not allow him out in the evening but later he repeatedly stayed away from home altogether instead of returning from school and did not come back till the next day." This happened 8 or 10 times, and the police had found him several times on street cars early in the morning. Sometimes this had taken place on very cold nights when "he could have been anything but comfortable." "There had been no trouble at all at home to account for his staying away. We were witness to the great affection in which the mother and boy held each other. John repeatedly said that the trouble which he had caused his family was all his own fault." . . . Asked to tell his trouble, the boy said that there was "a bad boy whom he had known for years, who said 'bad words' and had 'bad pictures.'" "He said bad words and I never listened to him. He said bad about girls. He had bad pictures." He had talked with John B. about several matters, and John found it hard to forget the pictures. "Every time I think of it I don't like it." Healy gives a detailed account of the boy's wanderings which started "directly after hearing the neighbors tell his mother that Bill T. had stayed out nights riding on the cars" (p. 160). He had himself witnessed indecencies carried on by sailors. He never could give an explanation of why he stayed out at night. The boy denied any vicious sex practices. Here, indeed, there was a "conflict" between the boy's ideas of what was decent and between his conduct. But it is perfectly clear that it is not the "conflict" which caused his delinquency. Indeed, were it not for the inhibiting force of his moral ideals, which formed one of the components of the conflict, it seems certain that his "delinquency" would have taken a much more serious form. The "conflict" was a help to the boy, certainly not, as Healy maintains (see above) the *cause* of his delinquency. It is not hard to see what happened. There was already developed in the boy a powerful system centering about sex. This system was partially excited by pictures and other means (see p. 159). An integral part of the system is Bill T.; and complete excitation of the system would be "doing what Bill T. does." (See p. 159 bottom). There is an inhibition

against certain things that Bill T. does but not against staying out at night, which is also done by Bill T. Therefore when there is a stimulus to the system, not, of course, the full compound stimulus but any slight stimulus⁵² that had become connected with the general scheme, the boy would feel impelled to "do what Bill T. does," and the inhibition preventing him from certain kinds of things he would "go night riding," which is comparatively inhibition-free. Physiologically the action may be explained on a drainage hypothesis.⁵³ A stimulus starts a flow of energy along the paths corresponding to the system "sex-Bill T.-pictures." The sex outlet is blocked by inhibition, so that the energy flows over into the path Bill T.—go night riding, following the way of least resistance. Thus the whole of the Boy's behaviour depends on stimulation—partial excitation—of the sex-system, which is an abnormal and almost pathological one. The Freudians and others who believe in "conflict" lose sight of the fact that a "repressed complex" which is not stimulated is perfectly harmless. It is a sleeping dog which may safely be let die. It is the stimulation in the form of partial excitation which causes the trouble, not the repression.

The case we have been considering would, in the hands of an out and out Freudian receive far more elaborate treatment with a much larger explanatory superstructure. First we would have heard of a "sexual Trauma" (see p. 162, where it is mentioned that the boy had been the object of some sort of assault early in life). Then there would have been "Unconscious workings of the (sexual) libido" and a conflict between the unconscious and the conscious stirred into further activity by the incidents of Bill T. and the sailors, &c. There would have been Rationalization (p. 159, where he filled in the gaps in his account by inventions). Overcompensation ("It's hard to forget" . . . "he frequently showed his disapprobation of all that is connected with illicit sex affairs"—he was "bothered," &c). Identification—he wanted to be like Bill and then his staying out at night would be symbolic of the performance of sexual acts—the way his libido passed the Censor. Finally we should doubtless have heard of "transference" to the investigator of the role of father (we hear nothing of the boy's father). As we have said before, these names hide a certain amount of truth, but the danger is in giving the names. The boy told lies, because he had forgotten some things and other things

⁵²So slight indeed as not to consciously be noticed by the boy. "He could not say just what led him to go riding."

⁵³This I regard as at least not disproved by the English school.

were distasteful to him—there were inhibitions. His conscience seemed particularly active because he was exposed to temptation. He undoubtedly admired Bill. His staying out at nights was certainly connected with the sexual trouble, as we have shown. But to describe all these things under the metaphors of Rationalization, Compensation, &c., is scientifically vicious and tends to a false finality, besides implying a host of other presuppositions not justified by the facts. Further, we could not agree in the main Freudian position, viz., that there was a conflict between the conscious and the unconscious, nor in the assumption that it is the "conflict" that causes the trouble. As to the infantile experience, that may have had something to do with the boy's later trouble, but we cannot see that any good purpose would be served by giving it the prominence that a Freudian explanation would demand. With regard to the transference of course it does not follow at all that the boy regarded the investigator as his father because he was obedient, etc., to him as he had perhaps been to his father.

SUBLIMATION

There is yet one other Freudian mechanism which we have to examine, viz., that known as "Sublimation." This consists "in the erection of a higher goal which is no longer a sexual one, for the particular impulses, in place of the unsuitable one." "To the contributions of energy gained in such matter for our mental performances we are probably indebted for the highest cultural attainments. A premature appearance of the repression excludes the sublimation of the repressed instinct; after the elimination of the repression, the way to sublimation becomes open again."⁵⁴ This is the theory of the ultimately sexual origin of all art, philanthropy, love of knowledge and the like. As a corollary to the sexual origin of most that is bad in human nature, we are asked to ascribe to the same source all the higher impulses of life. The theory which is involved is that our interests and motives in the majority of cases are not direct but that they derive their energy from a sexual source. The child is said to have more diversified sexual functions than the adult, and the narrowing down of these until they assume the normal adult form is accompanied by Sublimation of the repressed tendencies. This doctrine of Sublimation is perhaps the most fundamental point of the

⁵⁴Freud, *Uber Psychoanalysis*, p. 16. Quoted by Pfister. The translation is that of the English Edition of Pfister.

whole Freudian psychology. If it is tenable it means that we must look to sex as the source of almost everything worth while. A detailed examination of the whole position is again not here possible, but there are one or two points that should be noted. First, it does not necessarily follow that because "psychic energy" is diverted from sexual channels into higher paths, the origin of that energy is necessarily sexual. It is true that there is a limited amount of energy in the body which may be used for this or that purpose.⁵⁵ But we are not justified in concluding that, even though the theory of infantile sexuality is true, the energy liberated by the repression of part of the child's sexual tendencies has its origin in those tendencies. From Freud's point of view this must be the case, because he maintains that the repressed tendencies must reappear somewhere; they cannot be lost. But this assumption we hold not to be justified. We hold that such a repressed tendency may die absolutely away by lack of stimulation; in this case there will be available a certain amount of energy originally used up by what has been repressed. But the energy does not necessarily trace its origin to this source.

Further, it is inconceivable that such transfer should take place without, it seems, any connecting link. "Whenever" says Pfister "I found passionate devotion to astronomy or postage stamps among married women there was always need of love in the background, as I showed on p. 207."⁵⁶ Turning back to p. 207 we find one instance of each, the star science being preferred by a lady disappointed in love "because it had nothing to do with eroticism." Now it is undoubtedly possible for an action to have its origin in some other spring of action, as we showed in the case of the delinquent boy. But for such a transfer to be made when there is no connection, no reason, seems contrary to all principles of psychology, not least of the Freudian psychology which is nothing if not deterministic. The cases usually given are those of the unmarried woman who founds orphanages, of the young man renouncing his evil ways and turning to an austere pure art. In the first of these cases there is a possible connection by means of the child idea, yet even this is doubtful. In the second case, unless the young man concerns himself with such art as is directly connected with sex, we can see no link between art and the repressed "instinct." This may seem to assume the point at issue; but it would seem that there is

⁵⁵Compare note on drainage theory, p—.

⁵⁶P. 312. We presume that the learned Pastor's translator means that there was always in the background a need for love.

as much justification for assuming on the one side as on the other, and the burden of proof certainly lies on the side of the Freudians.

Lastly, even if the sublimated activity originally began with a sexual context, it does not follow that it will preserve that context. I may have a passionate interest in postage stamps because I am enamoured of someone with that hobby; this certainly does not mean, however, that any interest which I may subsequently develop in philately will have any connection with my affection. That interest will be due to the successively added reflexes of the system I am in the process of forming. One element in that system may be referable thereto, but as time goes on this will undoubtedly fade and become altogether overcast by the new activities I am acquiring. It may indeed disappear entirely. The whole question is not one that can be settled without much further study and experiment. It has on the one hand been assumed by the Freudians that such a process is possible and that it explains much of our capability of culture. But the case is extraordinarily difficult, and it has not been proved. No serious attempt at proof seems, indeed, to have been made, and the whole statement remains an elaborate *post hoc ergo propter hoc*. The doctrine as it stands today cannot be accepted without much more confirmatory evidence.

CONCLUSION

This ends our examination of the Freudian psychology. We have seen that in general we cannot agree with its tenets. With the clinical facts brought forward there is no quarrel. A large number of acute and suggestive observations have been made, and a large number of sufferers have undoubtedly received relief that could perhaps not have been obtained in any other way. But it is open to question whether the cures that have been effected were explainable as the treating analyst would explain them. The facts are new and valuable, and are undoubtedly exercising a great influence on contemporary psychology. But the Freudian interpretation of the facts is undoubtedly hasty and unjustified. Psychic processes have been set up which have been seen not to be ultimate processes. Fantastic assumptions have been brought forth in unnecessary prolixity. Hypotheses have been set up it almost seems because of their grotesqueness. The service of the Freudians lies, indeed, in their fact, not their theory. That the whole movement will have a far reaching effect upon the psychology

of the future is beyond question. But the effect will come rather from the suggestiveness of the Freudian system than from its dogma. As it stands today, the doctrine is rather a viewpoint of which progressive science should take account than a system which it should regard very seriously.

THE CHILD'S UNCONSCIOUS MIND¹

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PART II*

REFERENCE has already been made to the book of W. Lay entitled "The Child's Unconscious Mind." We have seen that this is an account of "The Relations of Psychoanalysis to Education" (sub-title), and that it depends upon a psychology which is of questionable validity. It is the first of what looks to be a series of such books. The field is new and alluring, and the teacher, like all hard workers, is always willing to listen to anything that promises to give a short cut. It may then be worth while to examine this book more closely with a view to the discovery of the precise way in which educators are said to be helped by the Freudian psychology. Differing with this psychology as we do in interpretation, rather than in the acceptance of the facts, it is to be expected that we shall find much that is suggestive and on the other hand much that is over drawn.

James has pointed out¹ that teaching must be in accordance with psychology but must not expect to be derived from Psychology. A knowledge of psychology may prevent blunders in teaching and will certainly shape the course of instruction. But psychology is not of itself the father of Method. Hence a certain amount of suspicion is raised against a book which contains on its first page the statements "By virtue of the new knowledge education becomes more nearly a science than it has been in the past. The new knowledge is a knowledge of a hitherto unexplored, or at least unsuccessfully explored, stratum of the mind as evidenced in the child. . . . Now we know the true cause why (children are more educable than adults) and why some children do better in school than others." "The hypothesis adopted in the newer psychology which is that tentatively presented here as the basis for a newer science of education is the hypothesis that the unconscious . . . plays an extremely important, if not an exclusively controlling rôle in the life of every individual."

*Being part two of "Education and Freudianism."

¹Talks to Teachers. Ch. I.

It follows that the educator who knows nothing of the "unconscious portion of the human mind cannot really teach except at haphazard." He is in the position of a man buying a house who has never been inside it. If then the hypothesis of the Freudian unconscious is the truth or an approximation to the truth, it is incumbent upon every conscientious teacher to buy this book or one like it. Now to the general thesis of the Unconscious several objections were raised in the previous chapter. There were brought up in that place a number of objections sufficient to shake belief in the theory, and it was stated that in all probability the facts could be explained by the principles of conditioned reflex and conditioned inhibition. Be that as it may, the important thing for the teacher to recognize is that the general Freudian theory of the unconscious is *extremely problematic*. Its status among psychologists is very precarious, and no teacher is yet justified in spending much time or money in acquiring knowledge of the system, or in introducing into his or her teaching methods based on this theory. A study of such a book as Lay's may well prove advantageous in directing attention to previously unnoticed points about children. But here ends the usefulness of the book; if it leads to theorizing about children along Freudian lines it is dangerous.

IDENTIFICATIONS IN SCHOOL

The general subject of identification has been discussed above. The identification claimed to be most common is that between the boy and his mother, and the girl and her father. (See Lay p. 114). Our general criticism still holds good that because the child wishes to be like his mother he does not necessarily identify himself with his mother. Further, we are told that "children tend to identify a woman teacher with the mother and to seek from her the sympathy and help which they earlier received from their mother." The moral drawn is that "the earliest task imposed upon the child in school should therefore be that which he can accomplish by his own unaided efforts"! Is this in order to induce the child not to regard the teacher as *in loco parentis*? And is not this advice very much like the old slogan of helping the child to help himself? It seems a long way round to a fact recognized since children began to be taught at all, if we must come to it via the Unconscious, Identification, and perhaps the Oedipus Myth. One who reads further of the "Identification of the task *with* the teacher" almost sus-

pects a misprint. The text goes on to say that the task is accomplished "for the teacher," the moral being that the child should be encouraged in "independent activity towards the world of reality, the only taste of which procurable within the cloister of the school is the feeling on the part of the child that he is mastering a part of something which is external to himself. *This will not be the case if he identifies the task with the teacher.*" The writer seems to deplore the fact that so little opportunity is given for individual work; if a child obtains an individual answer to his sums, they are *wrong!* It seems hard to avoid a reference to comic opera. The passage is a *reductio ad absurdum*.²

Further, we read of the teacher's identification of the pupils with each other as "preventing him from regarding them as individualities themselves." "It is unlikely that the teacher will be able to correct his own defective attitude towards his pupils if he is unacquainted with this mechanism and its operation in his own unconscious thoughts and acts." There is another explanation besides that of subliminal identification of the necessity under which many teachers go of "handling forty persons as one." This is the principle of "too large classes" and it springs from the related principle of "too little money." The doctrine of "Individuality" was thought of long before Identification began to be heard of as a principle of educational psychology. It is hard to resist the suspicion that the author of the book, being familiar with the doctrine as set forth by Thorndike and others, has adapted to it his theory of identification. Certain it is that he has added nothing by clothing it in the Freudian garb.

There is of course a very different reason for the child's preference of studies where the teacher is personally attractive and where the task is accomplished for the teacher. Here is nothing but a conditioned reflex³ of the type which has been continually discussed. It is to be noticed, however, that the bond of attraction for the teacher is due rather to the teaching than to his personality outside the school room. It is a common remark of children that so and so, a teacher, is a nice man outside the classroom, implying that the classroom work has not interested the pupils. That is to say, in the setting of classroom and school a system of unfavorable conditioned reflexes has

²"If the child wishes to be individual and make his work his own and different from other children's he must have different answers to the examples, answers which are called wrong." P. 117. Op. cit. What of the "World of Reality"?

³Or rather system of reflexes.

been established. The pupils have been bored with the work given them by the teacher, and thus has developed, by the process of discrimination, a series of reactions against the teacher in the classroom. On the other hand, precisely the converse has been known; a master was unpopular with many of us at school outside the classroom but admitted to be a good and interesting teacher. Paradoxically enough, this master perhaps accomplished the end of making the pupils independent of him better than a more popular man might have done. It is certain that the successes he obtained in his field (mathematics) were not due to the love of anyone for him. These facts are sufficient proofs, if further proof be necessary, that the Freudian Identification is not the true explanation of the attitude of a class towards their work and their teacher. It is a clear case of the establishment of conditioned reflexes, which depend upon the way in which the teacher handles the activities of the class. There is no evidence of "identification" with the teacher.

INTROJECTION IN SCHOOL

We have already described and discussed Introjection as the process of subjectifying the objective. On p. 120 of Lay's book the statement is made that "this unconscious mechanism is the basis on which is set all the academic education of a formative or cultural type. . . . If we teach geometry it is with the implication that the clearness and accuracy and finality of its theorems will be introjected into the mind of the pupil." There is need of little comment here. The implication is crass formal training of the most antiquated type, we had hoped. If this is the result of the application of Freudianism to education we should prefer to keep psychology out of the schoolroom altogether. Further on (p. 121) is to be found the astonishing statement "In the composition or essay the state of mind of the pupil should be projected upon some external object, say the air or the paper; and should show all the qualities that have been introjected by the teacher from the masterpiece." I have been unable to discover what this means.

As has been remarked before, the mechanism of "projection" often occurs in connection with the projection of reproaches. This aspect is discussed on p. 125 of the book under discussion. Here we find that the adolescent, troublesome boy is really in love with his teacher, and that his conduct is "prompted by a desire, unconscious on his part to be sure, to have her attention, to have her look at and talk to him."

Later we learn that "her interest in him, even her irritation, is an expression of her own unconscious wish to attract him." The trouble in a classroom, then, is really a case of unconscious love making! It is of course true that trouble in the class is often caused by desire to attract attention, but the attention of the *class* primarily, not that of the teacher. Further, love making is, according to the Freudians themselves, an individualistic matter. Hundreds of cases are given in the literature to show that the normal man or woman who is sexually attracted by one person (often a lover) finds it irksome to live with and associate with another person (often a husband). This seems obvious, but it is dangerous to take such things for granted. The sexual loving and being loved, courting and being courted is normally what the mathematicians call a one one (1, 1) relation. Hence the Freudian teacher must be in the happy position of being unable to be irritated at more than one member of the class, and that, unless she is abnormal, a boy. On the other hand her interest is in only one pupil too. It is no answer to this to say that actual lovemaking is not meant, but only a vague sexual attraction. The Freudian Unconscious, to which this relation is referable, recognises no such thing as a dilettante love making. Its intentions are strictly dishonorable. It is elemental, crude, Titanic, and it is only by the restraining hand of the Censor sitting at the door of the foreconscious that its evil purposes are watered down into gum pellets.

SUBLIMATION AND SYMPTOMATIC ACTS

The next hundred pages or so of the book deal with the question of the general reaction between the "unconscious and the conscious." There is a distinction of thinking on the "reality" and the "pleasure-pain" principles. This distinction, commonly made by the Viennese and allied schools, we have not yet examined, but it may be mentioned that there are doubts as to its ultimate validity. There is no quarrel with Lay's conclusion that children should be brought more into contact with reality than they now are. The only objection to his presentation of the thesis is that it has been better made before by those who do not believe in psychoanalysis and all that goes with it. Specific mention may be made of Sublimation. This is said to be "*the one aim of formal education.*" A question is here brought up which it is worth while to examine in detail. If we observe the conduct of a young child we are struck with the peculiarly purposeless nature of

his actions judged by the adult standard. A baby will throw out its arms "for nothing at all." A little child will shout, whistle or jump about apparently with no reason whatever. Later, a boy in school will "fidget" cut his name in the desk or shuffle his feet out of sheer perversity. Now if we are of an unimaginatively theological turn of mind we call such actions evidences of original sin. An adult who disfigured a desk in the way that children do would undoubtedly be either insane or morally perverse. Hence, as no dividing line can be found where the child grows into the man, it was argued that the child is morally perverse and that his perversity is educated out of him as he grows up or by "conversion." Today we say that the same tendencies are "sublimated." The originally vicious springs of action we utilized for higher aims, sadism for surgery, masochism for martyrdom, as we saw before. The mistake is the same in each case and consists in attributing a psychic, cosmic significance to every act of the child. The circle is completed when we find trifles said to be in every way symptomatic. Thus Pfister⁴ reports the case of a boy who "was accustomed to make frequently a peculiar grimace in which he turned up his nose, and finished it with the outstretched finger under it." Pfister reports with great pride how he discovered from this that the boy was guilty of vicious habits. Freud⁵ reports that one of his patients had cut into the flesh of the third finger of her left hand while trimming her nails. This is interpreted as having a definite connection with her marriage. "A man over-burdened with worries and subject to occasional depressions assured me that he regularly forgot to wind his watch on those evenings when life seemed hard and unfriendly. In this omission to wind his watch he symbolically expressed that it was a matter of indifference to him whether he lived to see the next day." "A teacher told me that one of his pupils, in spite of all admonition, constantly pushed his thumb through the button hole. The motive is obvious. Nail polishing, picking of the nose, and tearing of the skin from the fingers are comprehensible in this connection." Similarly "many symptomatic acts are already obsessions before they are recognized as such. The educator can easily observe this by taking the field against certain striking habits in writing, for example flourishes, writing above or below the line, shading the loops, etc. That handwriting is full of symbolisms no one denies."⁶ The general criticism of

⁴Op. cit. P. 79.

⁵Psychopathology of Everyday Life, p. 215. (New York, MacMillan, 1915.)

⁶Pfister, p. 376.

these examples will by now be clear. The man who forgot to wind his watch was ipso facto nervous. In this state one is apt to be forgetful. Similarly with the boy who made the grimace, and the other children who "fidgeted." So too the wife who hurt her hand—it was her wedding day. When such an action develops into a habit, we have a conditioned reflex formed to the sight e. g. of the buttonhole or certain details of the instruction, and when, as often happens in the cases quoted, the boy is in a state of nervous tension, the inhibitions usually operative are taken away. Now it is clear that such a philosophy as that before indicated threatens to do serious damage in the school-room. If wherever a child is restless it is to be assumed that the particular form his restlessness takes "means" something—generally of a sexual nature at that: if pulling a grimace signifies his disgust at his father's ill-treatment of his mother, the teacher being identified with the father; if the fact that he is unusually particular in washing himself means that he has something of an unpleasant nature upon his conscience, and the fact that he does not wash enough betrays the beginning of a stingy and grasping character; if his drawing a knife across his throat shows inherent masochism and losing his pocket knife shows that he is not in sympathy with bayonet fighting and war and hence that his father is a Bolshevik—if we are to believe all this, then the teacher is indeed to be omniscient and must indeed study Freudianism and the language of Symbolism and Automatism without delay. Fortunately it is not necessary to subscribe to the Freudian interpretation. In fact, the doctrine of the Viennese school on these points seems to be vitiated by no less than three false assumptions.

First, because a Freudian physician observes in a boy the habit of fidgiting in a certain way, and afterwards discovers that the boy has bad habits, there is no reason to assume that the fidgiting is the symptom of the habit. Nervous boys fidget. Nervous boys sometimes have bad habits. It does not follow from this that the particular form of the fidget will be symptomatic of the particular form of the bad habit, if such exists. Further, not all nervous boys have bad habits, although it is most likely that such as are actually suffering from bad habits will be most likely to come before the attention of the psychoanalytically inclined physician. Suppose now that a boy was really a pickpocket and that the teacher observed him idly putting his hand into and out of his pocket. The boy is called up and interrogated privately by the teacher. "What does the word pocket recall to you?" Hesitancy on the part of the boy, who has a guilty conscience and

thinks that the teacher has in some way "got a line on" him. There is final confession, and a most interesting case of "identification" of the man in the street with the boy himself. Suppose that the teacher had said "what does the word "God" mean to you?" the boy, with the same guilty conscience would have been obliged to confess. Supposing again that the boy had refused to sit up straight: the teacher says "why can't you stand upright? Does the word 'straight' bring anything to your mind?" Consequent confession. If the child plays with his button the word button under the stress of cross examination recalls a hip pocket from which the boy had stolen. If he makes peculiar motions with his fingers, these bring up to mind the motions made in picking a pocket.⁷ (Sec. 24a).

Now the startling thing is that all these things might be interpreted sexually and have been so interpreted by psychoanalysts. Putting the hand into the pocket, God (sexual purity), straight, fingering with a button, making particular motions with the hand, have all been given as examples of sexual symbolisation. Exactly the same results could be attained and has in countless occasions been attained by the teacher's assuming the requisite air of omniscience, looking straight at the boy as he came in and saying, "What are you thinking of," and refusing to be satisfied until some misdemeanour is confessed. Whatever is on the boy's mind at the moment can be brought out by such means and it is safe to say that nervous pupils generally have something on their minds.

The second objection to the Freudian doctrine of symptomatic action and automatism arises from the fact that there are in the case of the boy two distinct classes of action, the one class depending on what are known physiologically as pure or absolute reflexes, the other on conditioned reflexes. As has been pointed out in the literature the one class of action is specific and unlearned, at least by the particular organism in question, the other class is non-specific and learned. The one is independent of any experience. The other is the product of the experience of the organism. If for instance, I jump on hearing a noise, my action is unlearned. If I hear thunder in the distance and go upstairs to shut the windows, my action is learned. The one action is pure reflex—the other on our theory conditioned reflex. Further, the same action may be due⁸ to either of these causes at different times.

⁷If this seems fanciful, compare the experiment described by Mr. Watts in *Echo Personalities*. There a boy was actually interrogated by such means.

⁸Philosophical niceties notwithstanding.

If I put my hand to my face it may be that I have toothache or that I wish to hide a blush, or that I have had toothache in the past and have acquired the habit, or that I have persistently felt uncomfortable in the presence of others and so got into the habit of holding my hand before my face when I am in company. Or I may place my hand to my face because of a momentary irritation of the skin, a momentary stiffness of the arm or the like. These "purely" reflex actions may, at any time, result from the removal of the inhibitions that usually mark them. To take our boy again: when he is sitting at his desk not very comfortably there is, we know from physiology a certain definite "nervous pattern" formed, and a certain pressure on particular muscles the discomfort of which acts as a stimulus to change his position. In normal health this impulse is inhibited, but if the boy's nervous "tone" is a little low, the inhibitions will be inoperative and he will change from position to position, never perhaps, arriving at a really "comfortable" state. That is, he will "fidget all the morning." The same thing will operate with reference to his hands and every other part of his body. He will "play" with the button of his coat quite automatically, the usual inhibitions that prevent such motions being suspended. When once this has happened it is easy to see how he may build up a conditioned reflex the "cause" of which is nothing more than overwork or too many parties. Fidgeting with his hands in his pocket with a collection of pennies, the "feel" of the pennies may become a conditioned stimulus for fidgeting. Automatically, after he has recovered from his indisposition, he will then fidget with the pennies as soon as his hand goes into his pocket. Many "fidgeting" acts of children are undoubtedly of this character. They spring directly from a "pure" reflex action. They are entirely unconnected with the complex and picturesque vista of the Freudian automatism. They are "symptomatic" of little more than the fact that the boy has a nervous system. I may shut my eyes because I have a fly in one of them or because I do not wish to see a threatened accident. It may be the death of a brother or the peeling of an onion that excites the action of my tear glands.

It is to be noted that this affords a direct criticism of the Freudian doctrine of errors, which asserts that every error is symptomatic, that if e. g. a printer omits the "not" in the commandment "Thou shalt not steal,"⁹ he is therefore in sympathy with thieves, and that if I number this page the same as the last it is because I "unconsciously" wish to prolong the time at my disposal. Such actions may occasionally

⁹See Ernest Jones, l.c.

have genuinely symptomatic meaning but in the large majority of cases they are referable to purely physiological causes, of stimulation from the sight of the number on the last page (a conditioned reflex), of nervous exhaustion, and the like. It is indeed to be a terrible thing if the teachers are to be expected to take home their scholar's notebooks and carefully scrutinize all the errors in the hope of discovering the unconscious mind of the class! And yet the Freudian theory leads naturally to this, and it seems surprising that such an investigation has not been made.

Two objections have been made to the Freudian doctrine of "symptomatic actions," namely, that even if such actions accompany certain states of mind they are not necessarily caused by them, and that the actions which are given a meaning are often due to immediate physiological causes. The third objection in a way sums up the other two. It is that, because psychological integrations assume strange forms and include strange reactions which might appear at first sight to be absolutely unconnected with them, it does not necessarily follow that all apparently random actions are due to some such deep lying integration. In fact, there are very many actions which, from the psychological¹⁰ point of view can be considered as practically unintegrated, and others which are integrated only to the extent of forming part of an unintegrated conditioned reflex. Others again are combined into small systems and still others belong to the larger integrations. The great hierarchies under which so many of our actions and habits are subsumed are not responsible for everything that we do. There are some acts which are autonomous, owing obedience to no higher system, some strands that are not woven into the main fabric of our mental life. I may have a "mannerism" which is quite complicated, but which though it has grown up by the mechanics of the conditioned reflex, has absolutely no symptomatic significance in Freud's sense of the term. When an infant lies in the cradle all its actions are of this relatively simple form, because it has not yet had time to combine its actions into the larger integrations of adulthood. As it grows older much of those learned reactions are utilized in the building of its psychological structure but some are left over and others acquired which are of no "value" for the building process which is going on. Thus Freud's theory of infantilism really works against his theory of lapses and symptomatic actions, for if he maintains that the adult carries within him his childhood intact with nothing missing, that child-

¹⁰As opposed to the physiological.

ish reactions are not forgotten but lie stored in the unconscious, then it is clear that all of these comparatively unintegrated reactions must survive till the adult dies. As a matter of fact we seem to lose many of them, but some undoubtedly live on into adulthood, causing apparently random motions. Thus the acts which are described by Freud as symptomatic may be either purely physiological and entirely unintegrated, or they may be, indeed, part of a small integration and still unconnected with anything so far reaching as Freud would maintain. A friend of the writer's had a bad foot for some time during his boyhood. The foot is now better but he sometimes drops into a limp. Here we have what was originally a purely physiological reaction now set off by some originally extraneous stimulus or combination of stimuli, external or internal. There is no possible reason for assuming that such a reaction is due to an inferiority complex or anything similar.

Freud seems to have been guilty of a fallacy which has caused much trouble in the past. Just as it was found that some variations which survive have actual value for survival, and hence the conclusion was drawn that every variation that survives does so because of survival value; just as it was found that some things which are pleasant do good and some things which are unpleasant do harm, and hence it was concluded that the criterion for harm and good to the organism is pleasantness and unpleasantness: so, because some apparently unconnected actions are due to integrations fundamental to the organism it was concluded that all actions have such a fundamental import, and that it therefore followed that these important integrations might be deduced from the observance of such acts. There is no reason for assuming that the conception of "action with a reason" cuts any more than a cross-section of life, any more than that variations with survival value cut more than a cross section from variations that survive, or pleasant actions from actions that are good for the organism.¹¹ It is not to be denied that a skilled neurologist would undoubtedly see in the behaviour of members of a class more than could a teacher. Some actions which appear to be random are really symptomatic of a disease, and it would undoubtedly be of benefit for many teachers to be able to recognize such. But here the usefulness of the conception ends. The Freudian "automatism" theory, however valuable to experts may be the facts on which it rests, is unjustified as a theory

¹¹Or vice versa.

embracing every instance, and can only do harm if it is taken seriously by the teaching profession.

Returning now to the question of sublimation, it will be seen that the discussion of symptomatic actions has an important bearing. The doctrine of sublimation assumes that the actions of young children are due to inherently vicious, or perhaps, to be fairer, non-social tendencies which disappear normally by adulthood. These tendencies must then be accounted for, because the Freudian theory does not allow that they simply disappear. We have already seen that it does not follow that because certain tendencies disappear and others take their place, therefore the second group of tendencies is derived from the first. Moreover, apart from this there is every evidence that the Freudian postulate of non disappearance is unjustified. The discussion of automatism gives yet another point of attack. The child, we saw, is in process of integrating his activities, adding some, leaving out of the main structure others while some of them disappear, others remain as isolated "meaningless" mannerisms. Now the Freudian argument for sublimation rests on the statement that there are in the normal child activities which are due to tendencies recognised as "bad" or non-social. "Else," says the Freudian, "how can these activities be accounted for?" When for example we see a boy stick a pin into a smaller boy or do his best to break a telephone insulator, it is argued that the meaning of such actions is the Unconscious wish for mastery. But there is no reason to suppose that such actions have any meaning at all, much less a "bad" meaning. In the later years it is possible, in the early years it is highly probable that they are actions of the type we have described as unintegrated, free lance, responses, "due" to no tendency, conscious or unconscious. In order to show that they have a "bad" meaning, because they are due to a tendency which must later be turned into "good" channels, it must first be shown that they have a meaning at all, which has hitherto been assumed. There is a double burden of proof resting on the advocates of sublimation.

CHILDREN AND MORALITY

The view that we have advocated seems to effect a balance between certain views of morality as applied to childhood. There is on the one hand the view quoted, which assumes the doctrine of original sin and takes the object of education to be a process of exorcism. There is opposed to this the view that the tendencies of children are

all good but that children like many adults have "les défauts de ses qualités." This view is hard, on occasion, to believe. It also seems to assume an optimist position, just as its opposite assumes a pessimist position. Why should we assume that the action of a boy who kills a cat is really the obverse of the "hunting instinct" which is in itself good, rather than the result of the "cruelty instinct" which is in itself bad? We would like to believe this, but that is no argument. Between the two views there is the position that the boy or girl is neither moral nor immoral but non-moral.¹² According to this view the concept of morality does not apply to a child, any more than does the concept of weight to a syllogism or the concept of logical validity to a pound of butter. This view is interesting, but it seems automatically refuted by the fact that at a very early age children actually do know the distinction between right and wrong. The view that we are advocating seems to offer a combination of those three positions. By it a child is like an adult, not good nor bad in whole, but containing good and bad "streaks," integrations of social and anti-social import, and actions which as belonging to no integration, have no import at all. Such actions are reprehensible in an adult, because we feel that a full member of society has no right to have within him disconnected springs of action which may do harm to society. He has no right to be "thoughtless." He should have all his actions integrated in socially effective pyramids. But a child's integrations are not yet formed. We do not treat him in the same way as an adult, as fully responsible, that is we do not assume that acts which have an anti-social consequence spring from anti-social integrations. Some actions we are obliged to consider in this light, as in the case of precocious juvenile criminals. Then we adopt different and appropriate methods of correction. But many things that a child does we take to be meaningless from the moral point of view and adopt quite different means of punishment. There is no hard and fast rule for distinguishing. Every teacher must and does distinguish each case and each child individually, endeavouring to counteract bad integrations and to subsume activities under higher integrations which will provide inhibitions or springs of action as may be necessary. Thus the teacher who sees a boy breaking a window explains to him the nature of private property and shows how the boy can keep what belongs to him because other people respect his property when he is not there to watch it. This

¹²Or by another terminology, a-moral.

will sometimes fail to have the desired effect. In that case breaking of further windows can be treated as definitely "bad" and on a different plane from the relatively "unintegrated" action. Such a talk will have been a definite step towards the higher integration of the activity of breaking windows. Integrated, to some extent, this is of course already. But what has been now effected is to push the stimulus farther back, to use Holt's term, subsuming the activity under the great integration of things "bad for my neighbour." Henceforward the boy in breaking windows is consciously harming someone else, and is judged accordingly. This method of helping the formation of the child's structure of integrated activities is pursued by all good teachers and is one of the important aims of education is to form these integrations. Returning to Lay, on p. 227 is to be found the statement that "the one aim of formal education ought to be sublimation." This statement we are now in a position to deny in toto and to substitute the more guarded statement that an important aim in formal education is the formation of proper integrations and the subsuming thereunder of unintegrated activities. It is not claimed that this manner of regarding what has been done for centuries by good teachers is anything more than a new way of looking at old facts; but it will perhaps serve as an antidote to such statements as "knowing, as we do now, something of the existence, the nature and the mechanisms of the unconscious wish, we shall gradually begin to be able to get hold of it, and to sublimate those portions of it which should be sublimated and give the individual a scientific knowledge of those portions which should not be sublimated. This could not have been done before today."¹³

SUMMARY OF CRITICISM

We shall have no more to say on Dr. Lay's book. There are a hundred pages to which reference has not been made, but against all of them may be brought the same criticism as to the first part. They depend first of all upon a doctrine which is to say the least highly problematic and not yet sufficiently clarified or sufficiently certain to justify the building of any educational superstructure upon it. This doctrine has been of undoubted use in psychopathology, but for rational application it pre-supposes an arduously acquired technique and a knowledge of neurology which is out of the reach of any but a highly

¹³Lay. *Loc. Cit.*

trained specialist. Even granting this elaborate special training, it is certain that general educational use cannot be made of the theories thus laboriously understood. For such training will give the ability to understand the facts, most of which may be admitted, but it cannot render any sounder the general Freudian theory, which is untenable. Educational deductions direct from that theory lead to manifest extravagances. Such professed deductions as are of educational service are really *ex post facto*, and are attempts to fit modern educational theory to Freudian facts. These deductions may be found every one of them in such non-Freudian books as the Portland Survey and Thorndike's volume on Individuality.

FREUDIANISM AND SEX INFANTILISM

Before leaving the topic of the educational implications of the Viennese school of psychology there are one or two points remaining which, although not treated at any length by Lay yet deserve mention. It seems probable that the most valuable result of the new school has been to focus the attention of physicians and others upon the question of sex. That the importance of sex in life, both normal and abnormal, has been underestimated, there is no doubt. But there is equally no doubt that the Freudian school vastly overestimates it. When we read that a child's pleasure in splashing in a bath is of a sexual nature, that "interest in their own sex organs . . . explains why boys—as a rule—acquire a familiarity with numbers and figures earlier than girls,"¹⁴ it seems time to consider whither the doctrine is taking educational theory. On the other hand, if the final result is to be a more rational treatment of this all important question, if attention is thereby to be substituted for neglect, then a good end will undoubtedly have been served. Only it is for educators to see that the remedy is not worse than the disease.

The other point is the Freudian doctrine of infantilism. Reference has already been made to this theory, which is briefly that within every adult there lurks the child, that the child within the man exercises a great influence upon conduct, and that much neurotic and hysterical trouble is due to psychic traumata received in childhood. Thus Pfister,¹⁵ "Every neurosis is a manifestation of infantilism, not only

¹⁴Hug Hellmuth. *A Study of the Mental Life of the Child*, p. 88. Tr.

¹⁵Op. Cit. P. 244. 2 Freud. *Bemerkungen über einen Fall von Zwangsneurose*. (*Jahrbuch für Psychoanalysis*, I. 373). Quoted by Pfister.

because it constantly revives infantile phantasies, but because it forms an infantile form of functioning. Hence the task of healing the neuroses is the conquest of the infantilism, of the regression to childhood, and the abolition of this anachronism." "The unconscious is the infantile and that particular part of a person which has been separated from the personality at that time and hence has been repressed." This will be seen to have a superficial resemblance to the theory which we have advanced of unintegrated activities, but is really different in that it assumes the "suppression" and conversion into a psychological underworld en bloc of the impressions received during the first few years of childhood. "Thus infantile experience is really the source of all that is said to be due to the unconscious. Not only the dreams and ordinary performances of every day life, but also the highest achievements of art and poetry—we might add in his (Freud's) sense, also of morality and religion—are dependent in high degree on the impressions of childhood and outlined in these."¹⁶ Thus "there beckon to the pedagogue perspectives such as scarcely one of its official representatives would dare to dream of."¹⁷

The burden of proof for the whole hypothesis rests on the promulgators of the doctrine. It may be remarked here that the infantile connection or recollection which figures in most psychoanalyses is almost always the least conclusive. It does not follow that because a neurotic can remember a shock in infancy, usually of a sexual character, therefore his neurosis is due to that shock. They may be due both of them to some kind of a hereditary or at least physiological disposition. And there are many who have had such shocks in childhood without developing neuroses. As to proof, "the important material on which Freud based his well known thesis of the importance of the infantile sexuality is not published."¹⁸ Those engaged in teaching are justified in at least suspending their judgment on such a revolutionary theory until this evidence has been given.

¹⁶Freud, *Bemerkungen über einen Fall von Zwangsneurose*, (*Jahrbuch für Psychoanalyse*, I. 373). Quoted by Pfister.

¹⁷Pfister, pp. 113, 4.

¹⁸Pfister, p. 122.

THE STRUCTURE AND DYNAMIC ELEMENTS OF HUMAN PERSONALITY¹

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WE ought to be able to construct out of its various elements a general scheme, if not the details, of that composite whole which we call *Personality*. This should include its structure as well as its elements and dynamics.

It is obvious that we must have a fairly comprehensive and accurate conception of these factors if we would understand those alterations of personality which are met with as pathological conditions and particularly their psychogenesis.

In works on psychiatry we find constant reference to "destruction of the personality," as descriptive or explanatory of the mental phenomena observed. But this and similar phrases obviously describe and explain nothing in the absence of any clear, definite understanding of what "personality" is, and specifically of its structure and mechanism. Thus Kraepelin, in discussing the psychic symptoms of dementia praecox, considers that a certain "profound change in the psychic life [vaguely described] . . . indicates a complete destruction of the personality." The term is used by this writer and others without analysis and without any precise meaning. It becomes merely a vague concept which like that "blessed word Mesopotamia" gives "a heap of comfort" to the psychiatrist, as it did to the old lady of the legend, and saves the trouble of analytic thinking. Of course there is a change or destruction of personality in dementia praecox and other types of mental disorder, but we cannot understand the nature of that change, or in what respect personality is destroyed, without an understanding of its normal structure and of the normal functioning of its several parts. Likewise multiple personality, as it occurs in the alternating and coconscious types, can only be comprehended through a knowledge of the normal structure and dynamic mechanisms. On the other hand the phenomena of the latter pathological condition throw a flood of light upon the normal and can be utilized to test the validity

¹The greater part of this article will appear in a second enlarged edition of *The Unconscious* now in press. I am indebted to the courtesy of the publishers, The Macmillan Co., for permission to print it in advance in this Journal.

of theories. From these two points of view the studies on the psychogenesis of the two cases of multiple personality—that of B. C. A. and of “Miss Beauchamp”—which I recently published in this Journal² were made. Of course there are many other forms of functional psychoses which contribute important data for the solution of the problem of personality. On the other hand I agree with Professor McDougall and Mr. Shand³ that the inherited innate psycho-physiological mechanisms, commonly termed the instincts, innate dispositions, appetites, etc., and their organization with systems of acquired dispositions (“sentiments” and other complexes), acquired by experience, are fundamental to any satisfying theory of personality, and I would add to any theory of many functional derangements like the phobias and hysterical alterations. For the study of the instincts and other innate dispositions and mechanisms the data of normal psychology and comparative biology are essential, while the organization and integration of the acquired dispositions in the structure of personality must also be based on the researches in the former field of science.

We may then construct, provisionally at least, on the data derived from these various sources, a concept of the structure and dynamic elements of personality disregarding the specific psychological contents of the structure. The older way of considering human personality was to conceive it as an “ego” with various faculties. *We may now consider it as a composite structure built upon a foundation of pre-formed, inherited psycho-physiological mechanisms (instincts, etc.) by experience.*

Let us glance for a moment at this foundation with a view to a full comprehension of the significance of the innate (instinctive) and other “dispositions” composing its structure. The structure and the dynamics of these dispositions themselves we have already studied.⁴ Their teleological aspect needs further exposition for in their functioning the processes which they carry out have a distinctly purposive character for the personality.

Every instinct has an aim or end which it strives to fulfill and which alone satisfies it and it contains in itself the driving force which, as an urge, or impulse, sets into activity the mechanism and carries the instinctive process (unless blocked by some other process) to comple-

²Journal of Abnormal Psychology: Oct., 1919 and June-Sept., 1920.

³William McDougall: *Social Psychology*.

Alexander F. Shand: *Foundations of Character*.

⁴The Unconscious: Chap. xv.

tion and satisfies the aim of the instinct. Thus the instinct of flight impelled by the urge of fear has an aim to escape from danger and is not satisfied until the danger is escaped. Until that end is gained fear will not subside. If impeded in its activity it may awaken the pugnacity instinct which coming to the rescue may fight for safety. Similarly the instincts of acquisition and self-assertion are not satisfied and their urge persists until their ends are gained—the acquisition of certain objects in the one case and self-display or domination of other individuals or situations in the other case. Obviously the instincts and other innate dispositions have a biological significance ontogenetically and phylogenetically, in that they serve the preservation of the individual and species and the perpetuation of the latter. And obviously in the urge to satisfy their aims they determine and govern behavior. But in doing this they become modified and controlled by experience—by the dispositions which are acquired by experience. In this way the instinctive behavior of the individual becomes adapted by experience to the specific situations of the environment. Necessarily these modifications of the workings of the innate mechanisms by the imposition of experience upon and within them become very complicated and the problems of instinct and experience thereby evoked have been the object of much study and debate.

Now there is a body of evidence which leads to the conclusion that with such fundamental innate mechanisms as a basis the composite structure of personality is built up by experience.

By experience new “dispositions” are deposited (i. e. acquired), organized, and systematized, not only amongst themselves but integrated with the inherited mechanisms. Thus, on the one hand, are formed new structural mechanisms which in their functioning manifest themselves as mental processes and behavior, and, on the other, the instinctive mechanisms are brought under control by experience and mental processes acquire a driving force from the impulsive forces of the integrated instinctive mechanisms. This conception, which we owe to McDougall, I consider of great importance for an understanding of the growth of the mind.

Accordingly we may say: *Personality* is the sum total of all the biological innate dispositions, impulses, tendencies, appetites and instincts of the individual and of all the *acquired* dispositions and tendencies—acquired by experience. And it is limited to these.

The former would embrace inherited, innate psychophysiological mechanisms or arrangements, such as those of the emotions, feelings,

appetites and other tendencies manifested in instinctive reactions to the environment; the latter the memories, ideas, sentiments and other intellectual dispositions acquired and organized within the personality by the experiences of life.

The integration into one functioning organism, or whole, of all these innate and acquired dispositions with their mechanisms and inherent forces by which they come into play is personality.

As thus defined personality includes more than *character*. Character is the sum total of the predominating dispositions, or tendencies, popularly called traits. Thus in the domain of the innate dispositions every personality includes anger, fear, curiosity, and other instinctive reactions, but one personality might possess an angry temperament, while another an amiable temperament, meaning that in the one anger is aroused quickly and by a large variety of situations; "in the other it is rarely aroused and by few situations;" in the one anger is excited whenever the individual is thwarted, opposed, or wounded in his feelings; "in the other the response is never or rarely anger in such situations but perhaps sorrow, or pity, or some other feeling. One is said to be quick to anger;" the other slow to anger. Hence the character of the one is said to be "good tempered," the other "bad tempered." Yet every normal personality will manifest anger in some situation.

Likewise with fear: "One person reacts with fear to all sorts of threatening situations;" another rarely and to very few. One is said to have a timorous, or an apprehensive, the other a brave or bold, "sandy," character. Yet every one manifests fear in one of its phases (apprehension, anxiety, etc.) in some situation. There is no personality born without the fear instinct.

In the domain of acquired dispositions personality includes the memories, ideals, "sentiments," desires, points of view, attitudes, etc., of the individual in respect to himself, to life and the environment. These being acquired by educational, social and environmental experiences largely differ in every individual. Some become common, or substantially common to all or many. But those that are peculiar to, or acquire a dominating position and influence in the personality, play their part—and even a greater part than the primitive instinctive dispositions—in distinguishing the character of one personality from that of another. For in a large measure they determine the reaction to situations, the behavior and the modes of thought as intellectual processes that are peculiar to the individual. They stamp the *quality*

or character of the intelligence (its content) rather than the degree or capacity of the same.⁵ On this side, then, character is so much of personality as is represented by the predominating acquired dispositions of the individual. But as both innate and acquired dispositions become inter-organized by experience, as traits, into complex functioning wholes, or complexes, acquired traits include the former.

Thus a personality may exhibit a character recognized as idealistic, altruistic, selfish, egotistic, social, anti-social, etc., according to what ideals, "sentiments," morals, etc., have been acquired by experience and have a dominating influence. It is in these respects that he is largely the product of his education and environment, the influences of which have also organized his innate dispositions (instincts).

It is well recognized that the acquired dispositions are, by the very experiences by which they are acquired, organized into complexes and systems of complexes which are conserved as such in the storehouse of the unconscious to be drawn upon by memory or to be awakened again to activity as occasion may demand to serve the purposes of mental life.⁶

By such complexes are meant sentiments, ideals, ideas with their settings or meanings, systematized thoughts, etc., in short systematized experience in almost any domain.

Now, large numbers of these complexes have not only an organized structure but a dynamic potentiality and in consequence of these two characteristics they tend to function as a dynamic psychic whole. For in such complexes are incorporated one or more emotional or other instinctive mechanism from which their chief energy is derived. (This theory postulates not only a structure of mental dispositions but a correlated structure of hypothetical physiological dispositions which I have termed the "neurogram.")⁷ Insofar as dynamic complexes have structure and tend to function as psychic wholes they take on the character of unitary mechanisms or systems. From this point of view the most fruitful conception of the structure of personality is that which views it as built up of dynamic units which may be classed as

⁵"Intelligence Tests" therefore do not afford tests of character which is the most important element of personality from a sociological point of view. (See "Character vs. Intelligence in Personality Studies," by Dr. Guy Fernald, *Journal Abnormal Psychology*, Vol. xv., No. I).

⁶The Unconscious: Lectures ix and xv.

⁷Indeed I cannot see that "mental disposition" has any reality excepting so far as it is derived from its correlated physiological dispositions. (The Unconscious; p. 266.)

primary and secondary. The primary units are the innate psychophysiological arrangements or mechanisms which we have agreed to call the instincts, or innate tendencies or dispositions, in many of which are incorporated the emotions and other affects. These primary units become organized by experience into larger and larger units or unitary systems. Whether they are also innately organized amongst themselves and by themselves into larger systems as some maintain (Shand) may or may not be the case. It is not necessary for our present purposes to consider this problem. It is sufficient that those dispositions which are innate, such as those of anger, fear, joy, etc., do become organized by and with experiences into larger, dynamic unitary systems.

The secondary units are the acquired complexes and systems of complexes within which are generally incorporated one or more primary units. In these are found as already mentioned, memories of objects and all mental experience—"sentiments," wishes, aspirations, forebodings, apprehensions, and all other organized systems of thought which, on the one hand, have their roots in the deposited experiences of life and, on the other, their promptings and urges in the primitive innate instincts and other dispositions. Thus the innate and acquired dispositions are organized into unitary systems of greater and greater complexity but each having a tendency and, under certain conditions of dissociation, a greater or less freedom to function as a psychic whole. And the integration or potential integration of all these units and unitary complexes and systems into a functioning whole is personality. This does not mean that all the primary and secondary units take part in the functioning of the personality at any given moment or epoch, or necessarily at all. On the contrary, as we have seen, many lie dormant, for one reason or the other, in the unconscious. But, as we have also seen, they are potentially capable of being awakened and of then determining mental and bodily behavior. Furthermore, as every one knows nowadays, the various units of personality do not always coöperate and function harmoniously with one another, as no doubt they ought to do for the adaptation of the individual to circumstances, but sometimes are incited to conflicts and then, clashing with one another, they play the deuce with the individual and he fails to be able to adapt himself to the realities of life.

Amongst these acquired unitary systems there are certain ones which are of preëminent importance for the personality in the determination of mental behavior. I refer to those complexes known as the *sentiments*. By this term is understood the organization of the

idea of an object (an acquired disposition) or more correctly speaking, the psychic whole of idea plus its "meaning" derived from the setting of associated experiences (a complex of dispositions) with one or more emotional instincts. It must not be overlooked for one moment that a sentiment is something more than the organization of an emotion or other affect with an idea. There is nothing novel or fruitful in such a limited conception of the structure of a sentiment as that. A sentiment in its structure is the organization of an idea and meaning with an emotional *instinct* which has an aim and end which the instinct strives to attain and which alone satisfies the urge of the instinct. Such a structure has great significance and the conception a most fruitful one. For because of this structure the excitation of the idea necessarily involves the excitation of the instinct and the impulse of the latter determines behavior in reference to the object of the idea and carries the instinct to fruition. Thus if the sentiment be one of love the excitation of the instincts organized with the object determines through their urge the behavior to cherish or possess the object of the sentiment. And the attainment of this aim alone satisfies it. If the sentiment be one of apprehension of an object the instinct of fear incites behavior to escape from the danger contained in the meaning of the object. A sentiment in the hierarchy of units is a unitary system built up by the organization (through experience) of primary units with a secondary unitary complex (idea, meaning,⁸ etc.).

The importance of the sentiments in the dynamics of personality and therefore in the determination of mental and bodily behavior need not be dwelt upon. But there is one sentiment which plays such an important role both in these respects and in the content of that unitary system which we know as the ego, or consciousness of self, that something needs to be said about it. This sentiment is that which McDougall has termed the "self-regarding sentiment" which is intimately bound up with the idea or conception of the empirical self, and both should be considered together. It is only by regarding, as it seems to me, the conception or idea of the empirical self as a secondary unitary complex organized by experience that we can approach the solution of the problem of the ego and understand the phenomenon of two egos in one personality, as so often occurs in multiple personality.

The self-regarding sentiment, according to McDougall's theoretical analysis—and I may say his analysis has been confirmed by my own practical analysis of concrete cases—has structurally organ-

* This kind of meaning may be termed "associative" or "conditioned" meaning.

ized within it by experience the two opposing instincts, self-abasement and self-assertion, but either may be the dominating one. (This does not exclude the incorporation of other instincts according to the circumstances of the development of individual personalities). The idea or conception of self, proper, is, according to the theory, a complex and integrated whole organized by experience like the self-regarding sentiment. "McDougall has argued," to quote what I have written in a study of multiple personality,⁹ "and I think soundly 'that the idea of self and the self-regarding sentiment are essentially social products; that their development is effected by constant interplay between personalities, between the self and society; that, for this reason, the complex conception of self thus attained implies constant reference to others and to society in general, and is, in fact, not merely a conception of self, but always one's self in relation to other selves.' But, as I would argue, this formulation must be considerably broadened. Every sentiment (and therefore the self-regarding sentiment) has roots in and is consequently related to what has gone before, and the experiences of what has gone before of the self, i. e., what has been previously experienced (ideally or realistically) by the individual in reference to the object of the sentiment, determines the attitude of mind and point of view towards that object, and is responsible for the organization of the object and instinct (emotion) into a sentiment. The sentiment is the resultant and the expression of those antecedent experiences. They form its setting and give it meaning beyond the mere emotional tone. You cannot separate sentiment, conceived as linked object and emotional instincts, from such a setting. They form a psychic whole. This is not only theoretically true, but actual dealings with pathological sentiments (in which the principle can be most clearly studied), called phobias and other emotional obsessions, bring out this intimate relation between the sentiment and the conserved setting of antecedent experiences. Such practical dealings also show not only that the sentiment is the outgrowth of and the expression of this setting, but that by changing the setting the sentiment can be correspondingly altered. . . . I want to emphasize that in the dynamic functioning of a sentiment the setting coöperates in maintaining and carrying it to the fruition and satisfaction of its aim."

So far as concerns the incorporation of the two instincts, self-

⁹Miss Beauchamp: "The Theory of the Psychogenesis of Multiple Personality"; *Journal of Abnormal Psychology*, Vol. xv, No. 2-3, pp. 108, 120, 121.

abasement and self-assertion, "McDougall with keen insight and analysis, has argued that the self-regarding sentiment is organized with these two innate dispositions, but in different degrees in different individuals, and with the growth of the mind one may replace the other in the adaptation of the individual to the changing environment. Taking two extreme types, he draws a picture of the proud, arrogant, self-assertive, domineering person, with the feeling of masterful superiority, and angry resentment of criticism and control, and who knows no shame and is indifferent to moral approval and disapproval. In this personality the instincts of self-assertion and anger are the dominating innate dispositions of the self-regarding sentiment. On the other hand we have the type of the submissive, dependent character, with a feeling of inferiority, when the contrary disposition is the dominating one. McDougall's analysis was beautifully illustrated in the case of Miss Beauchamp by two personalities, B-I and B-IV, fragments of the original self, which were actual specimens from real life of his theoretic types. Again McDougall's theoretic analysis of the conception of self, showing the idea to be one 'always of one's self in relation to other selves,' is concretely illustrated and substantiated by the dissection of this mind effected by trauma."

The study of another case, that of "Maria" furnished the same result as respects the two personalities that were manifested.

As to the conception of the empirical self "an important addition to this theory both from a structural and dynamic point of view, I would insist again, is that the complex conception of self includes a setting of mental experiences of much wider range in which the idea of self is incorporated and which gives the idea meaning. The range of this setting extends beyond other 'selves' and may include almost any of life's experiences." By way of illustration let us take the two selves known as the "Saint" (B-I) and the "Realist" (B-IV) in the case of Miss Beauchamp. "Concretely and more correctly the psychological interpretation of the 'reference to others and society in general,' of the relation of one's self to other selves, would in this particular instance be as follows: The Saint's conception of self (with the self-regarding sentiment) was related to an ideal world as well as ideal selves contained in religious conceptions; and hence it became organized in a larger setting which gave it meaning of divine perfection such as is obtained, or aspired to, by saints, and in which were incorporated the emotional dispositions of awe, reverence, love, self-abasement, etc. This conception was not a product of, or related to

the social environment. Rather it was the product of an ideal world. She, as has been said, lived in a world of idealism, oblivious of the realities round about her, which she saw not 'clearly and truly' but as they were colored by her imagination. Her idea of self thus became the 'saintly sentiment' of self-perfection.

"On the other hand the conception of self in B-IV, the Realist, was related to and set in the realities of this social world as they clearly are, the world of her objective environment. And in this conception of self the instinctive dispositions of self-assertion and anger contributed the promptings and motive force to dominate these realities and bend them to her will."

It must be an obvious conclusion from the numerous and multi-form subconscious phenomena which are well known and need not be cited, that all the unitary complexes and systems which enter into the composite structure of personality do not necessarily emerge into awareness. Some function subconsciously and in this way determine conscious mental processes and behavior. Many remain conserved in the unconscious and have only a potential reality in that they remain latent but susceptible of being awakened into activity. It is also true that in the course of the growth of the personality many become modified by experience and are metamorphosed into new sentiments, ideals, new desires, new apprehensions, new meanings, etc.

The necessity for adaptation of the personality to the realities of life necessarily gives rise to conflicts, for the urge of some unitary complexes cannot be satisfied, and some are incompatible with the situations which reality presents, or with one another. A practical solution of the problem is compulsory. Compensation is sought. Sometimes compensation or compromise is successfully attained; sometimes it is not. Or the solution may be accepted and the urge of a rebellious system incompatible with the demands of reality is suppressed by voluntary or automatic repression. When neither compensation nor compromise is attained, or when the situation is not accepted and the rebellious urge continues, then disruption or disarrangement of the personality may follow with such resulting phenomena as have been already described. Integrated systems may become disintegrated or dissociated, permitting of independent autonomous functioning of conflicting systems. And of the unitary systems taking part in such conflicts one or more may, as we have seen, function subconsciously. Furthermore, as observation shows, dissociated complexes may take on growth independently of the integrated systems of the

personal consciousness, and thus create large subconscious systems. On the other hand both primary units (innate dispositions) and secondary unitary complexes and systems (acquired dispositions) may by the force of conflicts be completely repressed and cease to function within the personality. Thus, for example, certain instincts may be suppressed and systematic amnesia or other defects be produced. And so on.

Without pursuing farther this exposition of the empirical personality or going into details, it would seem that some such conception of the structure of personality as that of which I have given a mere outline will alone satisfy the phenomena actually observed under normal and abnormal conditions. Indeed the theory would seem to be a compelling induction from the phenomena derived from clinical observation and experiment.

REVIEWS

THE GROUP MIND. A Sketch of the Principles of Collective Psychology with some Attempt to Apply them to the Interpretation of National Life and Character. By William McDougall. New York and London: Putnams: 1920.

READERS of Professor McDougall's *Social Psychology* will hail the appearance of this book with satisfaction and will not be disappointed. For it does what his former volume seemed (by its title) to promise but what it barely began; it gives to the forces at work in group life the same sort of keen analysis which in his "Introduction to Social Psychology" the author gave to those in the individual life. The introduction to *Social Psychology* was nine-tenths introduction; but it was an indispensable introduction. For this reason those who have never read it should acquaint themselves with its principles and conclusions before beginning the present work; for as the author himself frankly states, the "Group Mind" is a sequel to the earlier volume and in fact "builds upon that book and assumes that the reader is acquainted with it."

It might in fact have been well if Professor McDougall had named his present work "*Social Psychology, Volume II,*" or had at least in some way avoided the rather misleading title which he has actually chosen. In the entire book there is nothing else so deserving of criticism as its title. Not only does it lead the reader into the assumption that the author believes in and means to discuss some form of Collective Consciousness, but it leads the author into a lengthy discussion of the distinction between Group Mind and Group Consciousness which is the least valuable part of his book, and which at times magnifies difference in terminology to a degree which is likely to be either mystifying or wearisome to the reader. McDougall's position—which indeed is proper enough—consists in maintaining that on the one hand there is no such thing as a Collective Consciousness, but that, on the other hand, society has in a sense, a mental life of its own. This mental life is not to be identified with any collection of individual minds externally added together, for it has a certain unity and continuity that are more than merely biological. Some groups, moreover, he insists, are even possessed of a group will. When we come to analyze what is meant by Group Will, however, we discover that this term is used merely as a name for the fact that the several individuals who compose the group desire not only their own individual welfare but the welfare of the Group as such. They all cherish a sentiment for the Group; they are all willing the same thing and conscious of doing so in connection with each other. Everyone will probably recognize this description as one which distinguishes clearly the more highly organized social groups; but to give this situation the title *Group Will* seems unnecessarily misleading. Too much stress, however, has already been laid upon a defect which, after all, is only one of terminology.

The author's treatment of his subjects falls naturally into three parts. The first outlines the general principles of collective psychology; the second deals with the mind and character of nations, while the third discusses racial and national character from the point of view of their probable origin and development. As Part I traverses ground already studied by many of his predecessors it gives the author little opportunity for originality of treatment, and the reader little of novelty or suggestion. It is an admirable and critical restatement of generally accepted views as to the nature of crowds and of more highly organized groups. In the second part, which deals with nations, there is more opportunity for original thought and more of interest for the reader who is already familiar with the accepted conclusions of social psychology. A nation, in Professor McDougall's opinion, is essentially a psychological concept. It differs from other large groups in its homogeneity but this homogeneity is essentially psychological in its nature. Various non-mental influences—biological, geographical, political, economic—doubtless help to weld a human group into a nation, but they do so only by affecting the minds of the people who compose it.

This mental homogeneity which is the peculiar mark of the nation may be either native or acquired; and in all actual nations is, in fact, both. In this connection the author gives a very enlightening discussion of the relative importance of race and of social tradition in contributing to national character. Not only does he take a midway position between the two extreme views which would attribute all influence to one of the factors, leaving out the other; he goes into the question carefully and in detail, making distinctions and giving elaborate and enlightening illustrations. Many readers, under the influence of what we may call the social tradition school, will be surprised to find him giving so much importance as he does to hereditary differences between nations. "The social environment of any civilized people is very largely the result of a long-continued process of selection, comparable with the natural selection by which, according to the Darwinian theory, animal species are evolved; a constant favoring of certain elements, a constant rejection of others. We may in fact regard each distinctive type of civilization as a species, evolved largely by selection; and the selective agency, which corresponds to and plays a part analogous to the part of the physical environment of animal species is the innate mental constitution of the people." On the other hand, however, "just as an animal species (especially men) modify their physical environment in course of time and also devise means of sheltering themselves from its selective influence, so each national life, each species of civilization, modifies very gradually the innate qualities of the people and builds up institutions which, the more firmly they are established and the more fully they are elaborated, override and prevent the more completely the direct influence of innate qualities on national life." In other words, the matter is by no means so simple as those would suppose who will have it that heredity contributes these and these elements while tradition adds those and those. For the two interweave and mutually influence and condition each other.

Another interesting point in Professor McDougall's view of social development is the importance which he attributes to individual leaders. One of the conditions of progress is, in his opinion, a considerable diversity in ability among the members of the group; and a society which is able to produce a few eminent thinkers will be likely, even if its average intelligence be relatively low, to go much farther than one whose individual members reach a higher average but all of whom stand on a dead level of good mediocrity. It is the individual who contributes the *new*. "Throughout the evolution of civilization, progress of every kind, increase of knowledge or improvement of morality, has been due to the birth of more or less exceptional individuals, individuals varying ever so slightly from the ancestral type and capable, owing to this variation, of making some new and original adaptation of action, or of perceiving some previously undiscovered relation between things." It is plain that we have here a very different view of social forces (and in the reviewer's opinion a much saner and more empirical view) than that furnished by the influential schools of Taine and Summer.

The most conjectural but the most original and interesting, and in many ways the most valuable part of the book under review, is the concluding section which deals with the formation and development of national types, the relative contributions made by racial heredity and social structure, and the forces which may have produced and modified both social structure and racial heredity. The last of the problems named is plainly the most conjectural; yet it is not one about which we should cry *ignoramus, ignorabimus*. To be sure, most of the differentiation between races was accomplished in the long ages before the historical period. But we are not without clues as to some of the forces at work even in that remote period. Even granting (as apparently we should) that there is no inheritance of acquired characteristics, we can see that geographic and climatic influences must have played a considerable part, directly or indirectly, in selecting certain physical and mental characteristics and repressing others. Since the beginning of the historical period it has been the social rather than the physical environment that has had the chief influence in molding and developing racial heredity. The intricate and complex ways in which this is brought about cannot even be outlined in a review of this length, but the reader will find Professor McDougall's treatment of the subject not only highly interesting but exceedingly persuasive. And it is in this connection perhaps more than any other that the book forces serious thought and in which it may find its greatest practical value. For by weighty argument and an accumulation of impressive historical illustrations, it brings home to the reader the tremendously serious consequences to the heredity fibre of the race that may result from various kinds of governmental action. Too seldom have we or our ancestors realized the fact that the decision lightly made by unreflecting governments may affect not only the welfare of the present generation but the very hereditary fibre of the nation. The reality of this danger is undeniable if we accept the view of the im-

portant role of individuals to which reference was recently made. The degeneration of the Greek and Spanish races is, in McDougall's opinion, due directly to the irretrevable squandering of their best heredity through the wars and other national activities which led to the destruction of great numbers of their ablest sons. Cases of this sort have been far from exceptional. And when we add to this the obvious fact that the improvement of the race through natural selection has been, for many centuries, nearly stopped through social influences, the resulting conclusion is not pleasing. To be sure, it is not probable that any very great changes in innate racial qualities have occurred; yet "what changes have occurred have probably been of the nature of retrogression rather than of advance and improvement; and this is true of both intellectual and moral qualities." Moreover, even the smallest change in innate racial qualities is of the greatest significance because of their cumulative influence upon tradition and social structure. "Especially the innate superiorities of the leading peoples, though relatively small, are of essential significance; and it is of the first importance for the future prosperity of the great nations of the present time that they should not suffer any deterioration of their innate qualities; for they alone have attained just such a level of innate excellence as renders possible the existence of civilization and the growth and continued progress of great nations. Especially is it essential that they should continue to produce in large numbers those persons of exceptional moral and intellectual endowments, whose influence alone can maintain the vitality of the national traditions and who alone can add anything of value to them."

WAR NEUROSES. By John T. MacCurdy, M. D., New York. With a Preface by W. H. R. Rivers, M. D., Cambridge. Published by the Cambridge University Press; G. P. Putnam's Sons, New York, 1918. Price \$2.50. Pp. IX plus 132.

THE AUTHOR prefers the term "war neurosis" to "shell shock." MacCurdy concludes that, although the neurotic in times of peace or war may show symptoms because of his inability to adapt, "this is fundamentally dependent upon some vague constitutional defect from which he suffers."

Chapter III discusses the genesis and symptoms of the "anxiety states." The importance of fatigue is stressed.

The author calls particular attention to the mental makeup of patients who develop "anxiety states" and refers particularly to "neurotic sensibilities."

A chapter is given up to the discussion of neuropsychic fatigue, and another to "Concussion."

In separate chapters we find a presentation of "the treatment of anxiety states," "the conversion hysterias," and "heart neuroses."

MacCurdy, when dealing with the psychology of these cases, declares his belief that the general antagonism or resistance of the officer or soldier to the warfare in which he is forced to engage is fundamental, and that this remains

conscious, "while some specific wish for relief begins to operate unconsciously and reaches expression when a situation develops that facilitates its transformation into a symptom." He mentions the striking fact that the vast majority of those suffering from the pure anxiety state are officers, while the conversion hysterics are almost entirely confined to the privates and non-commissioned officers. Differences of education and responsibility have produced a different mental outlook in these two groups, he concludes.

MacCurdy believes that "those who suffer from anxiety states have wished for death during the period of strain and fatigue preceding the final collapse, while sufferers from conversion hysteria have entertained the desire for disablement, for a 'Blighty' wound or for some disabling illness," as Rivers puts it in his preface.

To me MacCurdy seems to belittle the etiological role of the physical factors and to overstress the psychic element as a causative agent. There seems to be a preference for psychogenic explanations as basic, when there is insufficient evidence to back this up.

The subject is presented in a compact and interesting manner, and there is no attempt to pad the book with unnecessary additions.

MEYER SOLOMON.

ACTIVISM. By Henry Lane Eno. Princeton, N. J.: Princeton University Press, 1920; pp. 208.

THIS LITTLE book is an outline of a new theoretical philosophy, very comprehensive in scope, although here presented only in tentative form. The subject-matters considered comprise such seemingly diverse things as vital phenomena, atoms and electrons, consciousness, and universals. The treatment has affiliations with modern realism and also with modern occultism, with the latter not only by virtue of its doctrine of graded planes of being but because it paves the way for the admission of "supernormal" psychic phenomena and a doctrine of immortality, although these applications are not stressed. The author exhibits throughout a notable erudition in widely separated fields of learning, and, while not always convincing, his reasoning can in no case be thrust aside as ill-considered.

The constituents of the universe can be divided into the three classes of entities, relations and processes. All particular members of each of these classes, however, possess at least one property in common, namely their power to "make a difference" in the affairs of the universe. This ability to enter into a (mathematical) *function* which controls *change* is called *activity*. Although things possessed of no activity can be conceived, it is apparently true that all known factors in our world, whether "real" or "ideal" can be regarded as activities. Activities can be classified according to their *intensities*, or the degree of their powers to influence other things. Such intensity is the resultant of four component measures of any given activity: amount, range, persistence, and exclusion.

A survey of the universe in the light of these conceptions reveals, in the first place, three main *planes* of activity: the physical, the psychic, and the meta-psychic (realm of logical entities). These planes are differentiated from one another by the possession of distinctive components and laws, and by differences in "intensity," but they also form a hierarchical series within which one plane utilizes the materials of another in its formation. In this series a plane is called "higher" if its intensity is greater in general than that of another plane. The order (with decreasing intensity) adopted is: meta-psychic, psychic, electrical, chemical, molar and organic, including three sub-planes of the physical. The recognized views of physical science show how molar matter is constituted by the organization of chemical molecules, how molecules are built up from atoms, and in turn how atoms consist in electron systems. Following the lead of these principles, the author postulates an atom of awareness, the "psychon," which he conceives to be a still more fundamental unit into which electrons can be decomposed. Psychons are the elements of the realm of "psychokinesis." This conception of psychical atoms as centers of action is reminiscent of the principles in Leibnitz's *Monadology*.

The units of a higher plane combine into "unitary complexes," to form the units of the next lower plane, and the static characteristics of the latter units depend upon the activities of the former. By a hierarchical organization of this sort certain activities of the higher planes are enabled actually to increase their intensities, as for example in the production of a psychophysiological organism. Not all psychokinetic complexes are necessarily electrical, however, and the disintegration of an organism in one plane does not of necessity entail its decomposition in higher planes.

The influence of psychokinesis upon matter (or electricity) follows the general principle of the determination of the structure of a lower plane by the processes of the next higher plane. Although psychokinetic complexes vary in intensity, they cannot be said to have *energy* except on the physical plane. The general theory of relations is discussed at some length as an aid to the understanding of how psychons combine. The simplest psychokinetic complex would be two psychons aware of each other. Further "non-additive" organizations of psychons are conditional upon the participation of special relational entities from the meta-psychic plane. When these relations are spatial the psychokinetic complex becomes an electron and enters the physical plane. Disturbances on the psychokinetic plane in general affect processes on the physical plane only when the latter are delicately balanced, and conversely, disturbances on the physical plane must be very violent to penetrate into the psychokinetic. As a rule, the interactions of the planes are in terms of the determination of structure or other fixed properties, the mass (or the motion, with constant energy) of an electron depending, for example, upon the number of its constituent psychons.

A long chapter is devoted to the problem of *consciousness*. Consciousness is, in the first place, merely a highly intricate psychokinetic complex. The phy-

biological organism with which it is associated is, ultimately, simply another such complex, and the point of contact between the two must lie in the nerve processes of the cerebral cortex. Consciousness may be identical with certain portions of the psychokinetic system which constitutes the electrical activity of the cortex, or it may be some separate but connected organization which influences the cortical psychokinesis and thence the physiological processes, in accordance with principles already considered. The theory of this action is worked out in some detail with reference to modern conceptions of nerve physiology, and its possible intra-atomic mechanism is compared with that of the Zeeman effect, in physics.

The theory of the relation of the object of consciousness to consciousness itself is discussed at some length. If we explain the qualitative differentiations of consciousness in terms of intensity by identifying them with characteristic *frequencies* of vibration, the object may be supposed to enter consciousness via the identity of the frequencies in the two places (object and consciousness). (This realist theory, which has also been advocated by Holt and by Bergson, certainly cannot be maintained in the face of known facts). Spatial perception depends upon the "amount" of psychokinesis simultaneously involved, which is translatable into terms of pure intensity. Pleasantness and unpleasantness are correlated with the rhythmicity and arrhythmicity of psychokinetic disturbances, respectively. Images differ from sensations directly in psychokinetic intensity. Memory is explained by principles of association and on the assumption that relations of temporal succession are immediate constituents of psychokinetic complexes. Attention, perception, thought, emotion and will are also briefly considered.

There is a short chapter on the "meta-psychic plane," in which the author acknowledges the reality of logical entities, abstract relations, universals, and the like, but does not develop in detail their classification or relation to the contents of other planes. Finally, activism is considered in relation to the historic problems of philosophy, such as those of monism versus pluralism and of the relation of mind to body. The latter relation, for activism, is clearly that between two psychokinetic systems, either one of which may however, be merely part of the other. The general theory of activism does not determine the exact form of concatenation of these systems, but does indicate the broad principles of their interrelation, as seen above. In the field of epistemology, activism tends to be realistic; awareness is an entity rather than a relation, and the so-called "awareness relation" is simply psychokinetic *inclusion*. Relations are usually, but not always, "non-constitutive." The problems of falsehood and error are treated realistically; awareness is never in error, the defect always lying in unjustifiable *judgments* based upon the given awareness. Awareness, itself, is defined as "an activity to which nothing except that which is included within itself can make any difference," an exclusive characteristic. Values and personal survival are also considered, activism making possible the latter although not necessitating it. In conclusion, the bearings of activism on practical life, its utility as a working

hypothesis in psychophysics, and its relation to the modern relativity theory are discussed briefly.

This book is evidently the product of an earnest and protracted quest for new truth on the part of a mind well versed in academic lore, yet untrammelled and possessed of notable initiative.

LEONARD THOMPSON TROLAND.

PERSONAL BEAUTY AND RACIAL BETTERMENT. By Knight Dunlap. C. V. Mosby Company. St. Louis, 1920.

IN THIS little book of animated moderation and digested insight the author presents the significance of personal beauty, and suggests modes for its conservation. It is a novel approach to the science of Eugenics as seen from the viewpoint of physiological psychology.

The first half of the work is devoted to "The Significance of Beauty." The familiar proverb that "beauty is only skin deep" is convincingly exhibited as an added example of the mendacity of proverbs. The general trend of the exposition is to affirm a high correlation to exist between personal beauty and racial utility. Most eugenists are prone to emphasize the importance of intelligence and character almost exclusively. Mr. Dunlap returns to the Greek ideal; "the glorification of beauty and its exaltation as the primary ideal" ought to reign in human life. But, as with the Greeks, beauty is the foundation and not the completed temple. Beauty is the necessary foundation upon "which truth and holiness are built." Human beauty is an index of racial desirability, a sign of fitness for parenthood, and no more conflicts with the ideal of Goodness and Truth, than might and right are contrary principles. The only sound and durable relation these later ideals permit is "the bringing of might into the service of right." Beauty gains its *raison d'être* as the foundation stone upon which truth and holiness flourish; and the essential character to all Beauty is poise, which is largely mental. Thus Beauty, the base for the pyramid of life's values, has as its integrating principle, poise, a mental quality.

There are some persons who would disagree with the author upon the thesis that beauty expresses the potential racial utility of the individual, for while denying that beauty is merely skin deep, they believe it is often an unsafe criterion in judging racial value. This is especially true in the case of men, for from Socrates to Lincoln there is little evidence of any positive correlation between greatness and handsomeness. Furthermore, we must disagree with Mr. Dunlap in the statement that "beauty must be used as our guide" in the absence of any other scientific criterion. The legion of mental tests offers a quantitative criterion of general intelligence; the latter is both more objective and more desirable than Beauty, and is at least as highly inheritable.

The second half of the work is a contribution to methods and principles for the conservation of Beauty. The prevailing facts of racial degeneration and its

causes are given, free alike from the taints of the academic angel, and from the attitude of professorial pruriency.

Civilization has in two ways obstructed the further evolution of the race. First, the paralleled development of industrialism and humanitarianism has reversed the Darwinian phrase into the survival of the unfit. The danger to civilization lies in the very rapid multiplication of such, rather than in their existence and the obvious remedy is to preserve the individual but to prevent his propagation. But because ignorance and cupidity are as rampant as of yore, the only present expedient against the spread of the undesirables is education and publicity.

By perverting social and sexual standards, civilization in a second way, obstructs the progress of the race. The union of the fit is interfered with, and where there is such an union, it is relatively unfruitful. The prime problem of to-day is to increase the fruitfulness of the better stocks, and to decrease the fecundity of the undesirable. Information as to prevention is the chief weapon for the latter purpose, which in its turn will automatically increase the reproduction of the best specimens of the race. Anyone who has resided in the South and can maintain a detached attitude, realizes that the dissemination of information upon prevention is the most hopeful way of meeting the racial problem there.

The author rightly contends that both the decrease of the unfit and the increase of the fit must be obtained largely through education, publicity and the instillation of personal ideals, but at no time suggests an alignment between a new religious attitude and eugenics, a point the founder of the science, so zealously stressed.

N. D. HIRSCH.

THE PROBLEM OF THE NERVOUS CHILD. By Elida Evans, with an Introduction by C. G. Jung. Dodd, Mead & Co. New York, 1920. Pp. viii, 299. Price \$2.50.

AS ONE reads this volume one comes to feel that the author is a person of much native perspicacity and of admirable moral poise, who would have written a better book if she had never heard of Prof. Jung or, possibly one might say, if she had never heard of psychoanalysis. As evidence of Mrs. Evans' native soundness one finds such excellent opinions as:—"Let us remember that without interest there is no learning but only a mechanical poll-parrot method of memorizing with no assimilation of the truth or meaning in the words" (page 264). "The only discipline worth having is a natural one got by interest and habit" (p. 263). "The real teaching [of right and wrong] comes from the subtle suggestions of truth through the natural processes—directly through persons and things—of the environment" (p. 261). "It is impossible that the effort of *to-day* on the part of the parent should have a result *to-day* upon the child—at any rate, a result considered adequate and sufficient by the parent. It is quite as impossible that the effort of *to-day* should not have an invisible result *to-day*, and a visible result *to-morrow*" (p. 31). . . "almost all mental effects are long distance effects" (p. 32). "Such resistance is called

negativism, and you may be very sure sometime in the life of that individual there has been an unwise, over-exacting authority" (p. 116). "Never make your child or any person feel inferior, endeavour always to lift up by the desire to learn" (p. 275).

On the other hand, the applications of psychoanalytical theory and the author's physiological conceptions are often preposterous (to anyone, at any rate, who is not a follower of the "Zürich School"), and the accounts, in psychoanalytical terms, of the improvement or recovery of patients are sometimes over-facile and unconvincing (pp. 101-2, 121-2, 150-4, 201-221). Thus, "the health of the body depends upon the perfect condition of the functioning of the nerves. The energy which traverses them, called the libido, requires an unobstructed passage for the outflow of the creative energy," etc. (p. 47). The sentence appears to identify the nervous impulse and the libido. Again, on p. 48, one reads "the life energy or libido." The following is another remarkable physiological statement: "All emotions should be given free play under control. Therefore, only the constructive ones which help in the process of building the tissues of the body should be cultivated" (p. 49). Trophic "emotions" enjoying "free play under control" are a picture that is comparable with the author's "psychic muscle" (pp. 63, 182), or with the following: "Every seed, whether plant, animal or human being, contains a form of life which cannot be changed (temperament)" (p. 270). Again, the pleasure, apparently any pleasure, taken in muscular exercise is called "muscle erotism" (pp. 195-200, 221). In the reviewer's opinion almost everything which Mrs. Evans says about the libido and about sublimation is wildly figurative if not utterly mythical; and will eventually tend to bring all psychoanalysis into disrepute.

Although the volume has an appearance of arrangement, it is not systematically developed. This is, however, a minor matter since (in spite of a frequently inelegant use of English) it is readable and interesting. The important point is that it is plentifully sprinkled with sagacious remarks and observations of Mrs. Evans' own. One may wish that when Mrs. Evans writes another book she will either have learned more, or have remembered less, of psychoanalysis, and that she will draw even more largely from her personal fund of intuition and observation.

EDWIN B. HOLT.

REPPRESSED EMOTIONS. By Isador H. Coriat, M. D. New York: Brentano's, 1920. Pp. 213.

TO THOSE who wish a clear presentation of the psychology underlying the Freudian hypothesis, this book, by the well-known Boston psychopathologist (the author of "The Meaning of Dreams," "What Is Psychoanalysis?", "Abnormal Psychology," "The Hysteria of Lady Macbeth," and co-author of "Religion and Medicine") will be of interest and of use.

The chapter-titles, after the Introduction, are, respectively, "The Meaning of Repressed Emotions," "Repressed Emotions in Primitive Society," "Repressed

Emotions in Literature," "The Sublimation of Repressed Emotions," "The Development of Psychoanalysis," "The Depth of the Unconscious," and "A Fairy Tale from the Unconscious." For some strange reason, the book lacks an index, but the omission detracts less from this volume than it would from many others.

In the Introduction, Coriat suggests some of the sanctions of Freudism, and quotes (approvingly, we assume) from "the Master" a striking sentence with the odor of mastership about it, certainly: "In my continued occupation with the problems considered therein, for the study of which my practice as a psychotherapist affords me much opportunity, I found nothing that would compel me to change or improve my ideas. I can therefore peacefully wait until the reader's comprehension has risen to my level [sic], or until an intelligent critic has pointed out to me the basic faults in my conception." In other words, the idea had become somewhat fixed, and we see Freud, like Dürer's and Thomson's "Melancolia," stupendous, superhuman; and that his

"— subjects often gaze up to him there:
The strong to drink new strength of iron endurance,
The weak new terrors; all, renewed assurance
And confirmation of the old despair."

Only in this case the subjects "despair" of mental freedom in the human soul rather than of ever enjoying peace and light. Freudism without a doubt complements behaviorism as the most conspicuous present trend toward the outworn materialism of a former age—and all the more dangerous because so subtle and so seemingly far from any broad philosophic interest.

Says the present author, "It is this theory of psychical determinism which explains not only the psychology of every day life, but also dreams and neurotic manifestations. * * * Psychoanalysis has also shown that human motives cannot be explained by ordinary superficial reactions, but behind these reactions lie repressions and resistances of which the individual is unaware and which guide his thinking like an unknown force." It probably is this to which Coriat refers when he says, also in the Introduction, (the most important part of the book): "Psychology in both its academic and practical aspects is now at the parting of the ways and the immediate future will determine whether it shall remain unproductive or become an instrument of practical importance in the guidance of human interests." * * * "The motive force, the key to all human activity, is the repressed wish;" and society "can be psychoanalyzed in much the same way as an individual."

The persons who cannot repress the wish to learn still more and more about the Freudian hypothesis in its endemic relations, will find this volume, more or less fresh and novel in its treatment of some of the basic psychology, of much interest and very clear and readable, even if unpersuasive of the open-minded.

GEORGE V. N. DEARBORN.

MAN'S UNCONSCIOUS PASSION. By Wilfrid Lay, Ph. D. New York: Dodd, Mead and Company, 1920. Pp. vii, 246. Price, \$2.00.

THIS BOOK is a distinct contribution both to the psychology of sex and to the better understanding of the subconscious aspects of the human mind. (One would like to have Havelock Ellis's careful opinion as to its sexual validity). We may subscribe to a remark in one of its advertisements, (without admitting all its claims): "In order to prevent, or even to diminish, the numerous perversions of the love instinct, a higher and better view of marriage must be outlined; and without a knowledge of the unconscious factors in the emotion of love, a knowledge which is presented in no other book so readable as this, no real progress can be made in this direction. It is a book that will have a great part in removing some of the pitiable ignorance about one of the most vital questions of the present day."

"Psychoanalysts have been accused of deriving every human motive from sex. In this book Dr. Lay shows in a novel manner how love is essentially psychic, and never can be wholly physical. Unconscious passion, apparently a contradiction in terms, is here demonstrated to be the main-spring of the actions of every-day life. No one lives that is not passionately in love, all the time, with a person, either real or ideal. In many men and women this ideal personality is the only one loved, but loved unconsciously, while for others there is also a consciously loved or admired real person or ideal personality, different from the unconsciously desired one. How to unite the conscious and unconscious love, so frequently at variance in the same soul, and centre it upon one person of the opposite sex, becomes therefore a great problem of life to-day."

"The unconscious passion is thus seen to be a sort of muscular 'set' of both kinds of muscles, determined by a disposition of cells in the brain and nerves, and indirectly on verbal and other ideas which integrate them," (illustrated by the author with the mutual attitude of "Romeo" and "Juliet.")

"The eye of the youth, beholding the alluring beauty of the maiden as she walks and moves, instinctively arouses, by virtue of accumulated associations, inherited through thousands of years of evolution, a system of infinitesimal muscular contractions, in both involuntary and voluntary muscles. These sometimes never enter his consciousness, or if they do, they enter as an indescribable yearning to fondle her, or as a series of actions unaccountable to himself and to her. This behavior of his and how she consciously reacts to it is all that is manifest to either of them at the time, but it is of far less importance in their future welfare than that of which they are unconscious. * * * The sum total of all these organic reactions * * * is the physical substratum, if it is not itself literally, the unconscious passion which we have been considering."

This is excellent, timely James-Lange psychology as far as it goes, and constitutes the scientific sanction for the book. As Ribot says, "kinesthesia is the skeleton of the subconscious," and of this theoretically essential fact the foregoing quotation, and indeed, to some extent, this whole book, is an illustration.

It is by such actual applications, showing the utter unification of mind and body, that psychology will gradually make herself really intelligible to the eager proletariat.

Doctor Lay's book is suffused with Freudism, but keeps rather close to orthodox (academic) psychology. One reads much of the parental imago and of the imago-screen; of the Oedipus situation, of the incest-barrier, of psychic valuations, unconscious transfer, sublimation, Sadism-Masochism, and the adumbration. One can hardly help wishing he had a thorough psychanalysis of the mind of every author who elaborates a treatise out of the Freudian assumptions: how that would orient the reader among his perplexed ideas!

This volume has a short index (which is far better than none) and a partly-analytic table of contents, which serves some of the same convenience. Its cover is one of the most attractive seen for a long time. The price, as profiteering still goes, is human.

GEORGE V. N. DEARBORN.

NOTES

AMERICAN MEDICAL EDITOR'S ASSOCIATION. The 52nd Annual meeting of the American Medical Editor's Association will be held at the Hotel Lenox, Boston, Mass., on Monday and Tuesday, June 6th and 7th, under the Presidency of Dr. H. S. Baketel, Editor of the Medical Times. A novel feature of the literary program will be symposia which will be discussed by various members. The subjects will be, "Group Practice and the Diagnostic Clinic;" "What should be the Attitude of the Profession Toward Health Centres;" "The Correlation between Editorial, Advertising and Subscription Work." Every doctor, even remotely interested in medical journalism, is most cordially invited to attend.

CENTENARY OF BLOOMINGDALE HOSPITAL. The Hundredth anniversary of the opening of this hospital will be celebrated on May 26th. The exercises will include addresses by Dr. Pierre Janet of Paris, Dr. Richard C. Rows of London, and by Dr. Lewellys F. Barker and Dr. Adolf Meyer. The hospital is the department of nervous and mental diseases of the New York Hospital which, since it was opened in 1792, has made provision for the treatment of persons suffering from mental disorders. As early as 1808 a separate building was provided for these cases at the general hospital at Duane Street and Broadway, New York City. In 1821 the department was removed from the city to a point on the Bloomingdale Road, which is now the location of the library of Columbia University, and was given its present distinctive name. Since 1894 it has been located at White Plains.

BOOKS RECEIVED

The Elements of Practical Psycho-Analysis. By Paul Bousefield. E. P. Dutton & Co. Pp. XII and 276. \$5.

Brightness and Dullness in Children. By Herbert Woodrow. J. P. Lippincott Co. Pp. 322.

The Dearborn Group Tests of Intelligence, Series I. By Walter F. Dearborn. J. B. Lippincott Co. Pp. 28 (Pamphlet).

Manual of Psychiatry. Edited by Aaron J. Rosanoff. John Wiley & Sons, Inc. Pp. XV and 684. \$4.

Suggestion and Auto-Suggestion. By Charles Baudouin. Dodd Mead & Co. Pp. X and 290.

Psychopathology. By Edw. J. Kempf. The C. V. Mosby Co. Pp. XXIII and 762. \$9.50.

Mysticism, Freudianism and Scientific Psychology. By Knight Dunlap. The C. V. Mosby Co. Pp. —. \$1.50.

Man's Unconscious Spirit. By Wilfred Lay, Dodd, Mead & Co. Pp. 337.

The Psychology of Social Reconstruction. By G. T. W. Patrick, Houghton, Mifflin Co. Pp. IX and 273. \$2.

The Psychology of Nationality and Internationalism. By W. B. Pillsbury. D. Appleton & Co. Pp. VIII and 314. \$2.50.

The Behavior of Crowds. By Everett Dean Martin. Harper & Brothers. Pp. 312. \$2.

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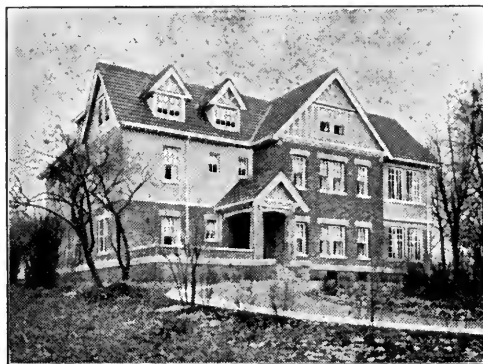
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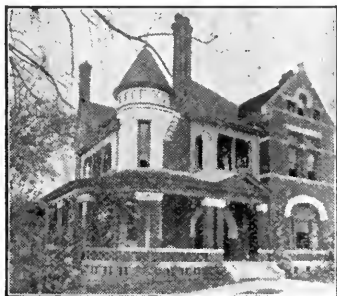
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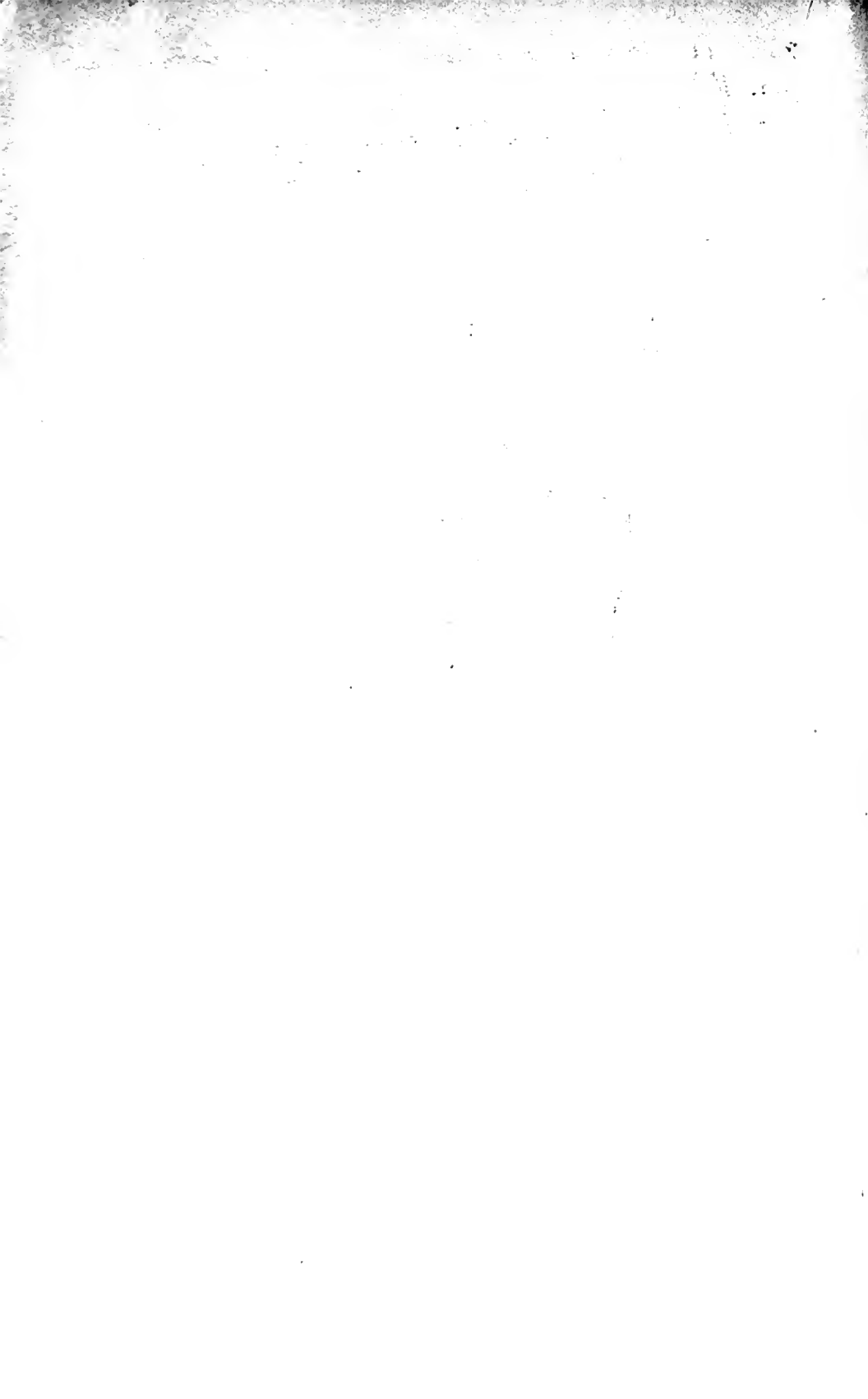
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